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Trends In Servers

From Cooling To Blades, Servers Are Going Through Subtle Shifts

by Elizabeth Millard

AS SMALL TO MIDSIZED enterprises work to make their servers more efficient, they can expect to see shifts in what type of servers become available, how software licensing is done, and whether cooling and power can be used with greater ease.

As with any other area of technology, server trends come and go, but many that are on the horizon now are likely to have a major impact on data centers soon. Here are some key trends that are worth watching over the next few years.

More Efficient Cooling & Power Systems

Particularly with the advent of blade servers, which concentrate power but throw off a significant amount of heat, cooling has become a major issue in the data center. Newer strategies such as creating a heat corridor are rapidly replacing more traditional techniques such as pushing cool air through floor tiles. Experts expect that as the issue continues to be important, more technologies will address power and cooling specifically, and manufacturers will pay more attention to how cooling and power concerns impact server efficiency.

"We expect to see strong trends around modular, mobile computing and more efficient cooling technologies," says Giovanni Coglito, chief technology officer at Rackable Systems (www.Processor.com/RackableSystems). The data center of

today, which is constrained by wall, power, and a fixed amount of HVAC infrastructure, will be changed by a series of new technologies designed to help IT environments achieve the highest possible system performance and density without being



constrained by a given footprint over a power envelope, he says.

"Leveraging power-friendly innovations such as DC power or hydroelectric power is just the first step," says Coglito. "A whole new wave of innovation is on the horizon."

Rise Of Virtualization

If there's one major buzzword in the server industry, it's virtualization—the ability to run multiple applications and operating systems on a single server. Many believe the tactic is worthy of the hype because it can be used in all types of data center environments, from those using mainframes down to a few x86 servers.

Market research firm Gartner has predicted that virtualization will have a dramatic impact on new server sales, which could impact the sales of new servers and lead server manufacturers to find other avenues

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they provide and focus on the relationship with customers."

ITSM is an umbrella term for this service-centric view of IT management and governance, embodied by a number of process frameworks that instantiate ITSM concepts into a set of best practices. The ITIL (IT Infrastructure Library) is the largest and best known of these; however, others include the Microsoft Operations Framework, or MOF (www.microsoft.com), COBIT (Control Objectives for Information Technology; www.isaca.org/cobit), and Business Information Services Library, or BISL (www.bita-center.com/bisl2). ITIL best practices cover service management and operational guidance, including activities such as service support

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or service-centric approaches to IT management, most notably the ITSM (IT Service Management) model. According to Jan Van Bon, writing in "IT Service Management: An Introduction," "Providers of IT services can no longer afford to focus on technology and their internal organization, they now have to consider the quality of the services

[Any IT manager contemplating introducing ITSM concepts to his organization should start with some introductory training.]

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Future Trends In Servers & Storage

Blades, virtualization, and increased power and cooling demands will all have an impact on servers and storage now and well into the future.

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■ **Altiris** released its Altiris SecurityExpressions 4.0 software that's designed to integrate enforceable security with IT service management. ■

Cisco describes its new Secure Wireless Solution as a new architectural design based on the company's Self Defending Network framework.

■ **Citrix** released the latest version of its application delivery system, Citrix Presentation Server 4.5. ■ **DataCore Software** released SANsymphony Enterprise Edition 6.0, a storage virtualization package. ■ **Dynamic Network Factory** released a new 4GB RAID subsystem for small and midrange enterprises. ■ **Fluke Networks** introduced an updated version of its DTX CableAnalyzer cable tester. ■ **Netcordia** introduced the NetMRI 2.0 network-analysis appliance. ■ **PC Guardian** announced the USB Port Security System, which protects companies from unauthorized access to their data. ■

Planet Associates released the latest version of Planet IRM, a visualized CMDB designed for data centers and company networks.

EACH WEEK

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(how many employees)?**

- Less than 10 200 to 499
 10 to 99 500 to 999
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**3. What is your annual computer hardware/
software purchasing budget?**

- \$0 to \$9,999 \$100,000 to \$249,999
 \$10,000 to \$24,999 \$250,000 to \$499,999
 \$25,000 to \$49,999 \$500,000 to \$999,000
 \$50,000 to \$99,999 \$1,000,000+

**2. How often do you purchase computer
hardware/software?**

- Weekly Quarterly
 Bi-weekly Annually
 Monthly No Involvement

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Upcoming IT Events

- FEBRUARY -

Gartner Business Process Management Summit
February 26-28
San Diego, Calif.
www.gartner.com/2_events/conferences/bpm3.jsp

Comptel Plus Spring 2007 Convention & Expo
February 27-March 2
Las Vegas, Nev.
www.comptel.org

- MARCH -

DAMA International Symposium
March 4-8
Boston, Mass.
www.wilshireconferences.com

VoiceCon
March 5-8
Orlando, Fla.
www.voicecon.com

Gartner Business Intelligence Summit
March 12-14
Chicago, Ill.
www.gartner.com/2_events/conferences/bi5.jsp

Boston SecureWorld Expo
March 14-15
Boston, Mass.
www.secureworldexpo.com

TelecomNEXT
March 18-21
Las Vegas, Nev.
www.telecom-next.com

Gartner Outsourcing Summit
March 19-21
Dallas, Texas
www.gartner.com/2_events/conferences/std10.jsp

FOSE
March 20-22
Washington, D.C.
www.fose.com

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Data Center World
March 26-27
Las Vegas, Nev.
www.afcom.com

Visit Processor at Booth 514

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March 26-27
Las Vegas, Nev.
www.afcom.com

RFID World
March 27-29
Dallas, Texas
www.shorecliffcommunications.com/rfid07

Secure IT Conference
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Sacramento, Calif.
www.secureitconf.com

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MarketPlace NEWS



Vista Forecasts "Overly Aggressive"

MICROSOFT CEO Steve Ballmer says the company's new Windows Vista OS will not create a big surge in PC sales during fiscal 2008. "Some of the revenue forecasts I've seen out there for Windows Vista in fiscal year 2008 are overly aggressive," he says. Initial figures from NPD Group seem to support Ballmer. The research group says first-week sales of Vista were down about 60% over first-week sales of Windows XP. There is one bright spot, though: NPD Group says retail PC sales were up 67% compared to the same week last year.

More Dell Execs Leave

SINCE THE MIDDLE OF DECEMBER, Dell has had six executives resign. The latest resignation came as Paul McKinnon, the senior vice president in charge of the company's global human resources operations, decided to leave the company. His resignation follows that of John Hamlin, in charge of global online and marketing operations, who resigned after he turned down the opportunity to head up Dell's new consumer group. Hamlin plans to spend more time with his family and on Bozeman Limited Partnership, his private equity firm. The executives who have already left Dell include John Medica and Joe Marengi, both senior vice presidents; former CFO James Schneider; and former CEO Kevin Rollins.

Microsoft Warns Of Daylight Saving Time Issues

FOLLOWING THE U.S. Energy Policy Act of 2005's change in making daylight saving time start three weeks earlier this year, Microsoft says several products will have to be updated to accommodate the change. Windows Vista and Office 2007 already have the new rule built in, but the majority of Microsoft's earlier OSes and applications, such as Win2000/XP, Visual Studio, Outlook 2007, and Windows CE, will need to be updated. Not updating the programs could lead to problems such as automated processes not happening at the right time or calendar apps not working correctly. Microsoft also warned consumer appliances may not automatically adjust to the new DST rule.

FTC Pushes Pretexting Ban

THE U.S. FEDERAL TRADE COMMISSION says pretexting violates the Telecommunications Act of 1996 and is illegal. It has asked a federal court in Florida to permanently ban telephone pretexting, which is a method where a person pretends to be someone else in order to obtain personal phone records. The FTC case is against several defendants involved in the HP spying scandal, where investigators used pretexting in an attempt to find out who was leaking private information about the HP board of directors. The FTC wants the Florida court to also force the defendants to give up any money they made for their work with HP.

Xerox Working On Search Engine

XEROX'S PARC (Palo Alto Research Center) has been working with Powerset, a San Francisco startup, to develop a search engine it hopes will compete against Google. The search engine, which developers intend to have live by the end of this year, will use natural language processing to develop what it contends will be better, more applicable results. PARC has been working on natural language processing,

which aims to better understand the meaning of words and how they work together, for 30 years, and researchers have recently made some breakthroughs in the technology. Most of today's search engines, including Google, base their results on keywords.

Cybersecurity Test Planned

THE U.S. DEPARTMENT OF HOMELAND SECURITY is now planning a second test to see how prepared government and private organizations are to respond to a potential large-scale attack over the Internet. The test, called Cyber Storm 2, is planned for March 2008 and will be similar in nature to the first Cyber Storm, which took place in February 2006. The original test involved about 115 organizations; Cyber Storm 2 is expected to involve a much greater number of organizations, including more participation from international groups.

IT Sabotage & Work Behavior Linked

EMPLOYEES WHO INTENTIONALLY wreak havoc on companies by sabotaging corporate systems often show warning signs before they do their damage, according to a study the U.S. military and Carnegie Mellon University's CERT Coordination Center conducted. The study found that the majority of people who committed the sabotage were IT workers who displayed characteristics including arguing with co-workers, being paranoid and disgruntled, coming to work late, and exhibiting poor overall work performance. Of the cybercriminals, 86% were in technical positions, and 90% had administrator or privileged access to company systems. Most committed the crimes after their employment was terminated, but 41% sabotaged systems while they were still employees at the company.

Microsoft Agrees To Iowa Settlement

ALTHOUGH THE TERMS of the settlement have not yet been disclosed, Microsoft announced that an agreement has been reached in the class-action lawsuit it was facing in Iowa. In that suit, it was alleged that Microsoft had overcharged consumers in Iowa and lawyers for the plaintiffs were requesting damages of up to \$330 million. Those who purchased a Microsoft OS and application software, including Word, Excel, and Office, between May 1994 and June 2006 are eligible to be compensated with the money from the settlement.

Mobile Device Attacks On The Rise

ACCORDING TO A STUDY conducted by McAfee, last year mobile phone users experienced five times as many security attacks as they did in 2005. For the study, McAfee

gathered information from more than 200 mobile operators located all over the world, 83% of which reported subscribers who had experienced some type of mobile device infection. Mobile device users in Europe, Asia, and the Pacific Rim were most likely to be victims of a large-scale attack, the study found. However, only 15% of all reported security events were large-scale, affecting between 1,000 and 100,000 devices.

Print Test Standards Backed

KODAK, HP, CANON, and other leading printer manufacturers are working to make it easier for users to get a clearer picture of how many pages a printer cartridge will print. The printer manufacturers, which currently establish their own standards for testing the life of print cartridges, have announced their support for a standard put together by the International Organization for Standardization. The standard details the type of system printers must be tested on, the standard test document, and the number of cartridges to test. The new standard tests should allow users to more easily compare printers from different manufacturers.

Study Ranks ID Fraud By Geography

RISK MANAGEMENT firm ID Analytics recently released the results of a study of more than 1 million fraud events, which were examined by geographic location. Specifically, the study used information from fraudulent applications for credit that had been obtained using stolen identity data. The study found that people in Floral Park, N.Y., are the highest at risk for becoming victims of identity theft. Also at the top of the list for the riskiest five-digit ZIP codes were Faulkton, S.D., Old Bethpage, N.Y., New York City, and Manhasset, N.Y. New York, California, Nevada, and Arizona were found to be the states at the highest risk, while Wyoming, Vermont, Montana, and North Dakota were the safest.

Outsourcing Study Offers Sobering News

ACCORDING TO A RECENT STUDY by the Brookings Institution, one in five programming, software engineering, and back office jobs, such as data-key entry, could be lost to offshoring in the next several years. The loss would be most heavily felt in metropolitan areas that traditionally have a large number of workers in those fields. According to the study, there are 28 metropolitan areas that contain 13.5% of the U.S. population, and those areas will most likely see a decrease of between 2.6% and 4.3% of jobs due to offshoring. Included in those areas are Boulder, Colo.; Lowell, Mass.; San Francisco; San Jose; and Stamford, Conn.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

| Company | Symbol | Year Ago | Feb. 12 | Feb. 16 | % change from previous week |
|-------------------------|--------|----------|----------|----------|-----------------------------|
| Avaya | AV | \$10.25 | \$12.80 | \$13 | ▲ 1.56% |
| BEA Systems | BEAS | \$10.58 | \$12.30 | \$12.93 | ▲ 5.12% |
| Computer Associates | CA | \$26.99 | \$26.52 | \$26.81 | ▲ 1.09% |
| Cisco Systems | CSCO | \$19.55 | \$27.54 | \$27.49 | ▼ 0.18% |
| Dell | DELL | \$31.57 | \$23.52 | \$24.39 | ▲ 3.7% |
| Electronic Data Systems | EDS | \$25.85 | \$28.27 | \$29.17 | ▲ 3.18% |
| Google | GOOG | \$345.70 | \$458.29 | \$469.94 | ▲ 2.54% |
| HP | HPQ | \$31.74 | \$42.10 | \$42.77 | ▲ 1.59% |
| IBM | IBM | \$80.44 | \$98.58 | \$98.99 | ▲ 0.42% |
| Intel | INTC | \$21.13 | \$20.80 | \$21.23 | ▲ 2.07% |
| McAfee | MFE | \$24.71 | \$29.41 | \$29.89 | ▲ 1.63% |
| Microsoft | MSFT | \$26.39 | \$28.94 | \$28.74 | ▼ 0.69% |
| Oracle | ORCL | \$12.49 | \$16.65 | \$16.70 | ▲ 0.3% |
| Red Hat Software | RHT | \$26.55 | \$24.58 | \$24 | ▼ 2.36% |
| Sun Microsystems | SUNW | \$4.33 | \$6.42 | \$6.29 | ▼ 2.02% |
| Symantec | SYMC | \$17.06 | \$17.82 | \$17.95 | ▲ 0.73% |

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Multifunction Security Appliances

More Bang For Your IT Buck

by Sandra Kay Miller

• • •

SEVERAL YEARS AGO, Marcus Ranum, security industry luminary and inventor of the proxy firewall, began talking about the emergence of a "god box"—a single appliance capable of handling all aspects of network security. "There's really very little benefit to having these things separate," says Ranum, who sees the various security technologies as a side effect of the fact that different companies had different objectives at a certain time for what they were going to build. The growing trend of security vendors continuing to acquire each other and integrate separate technologies into a single box has proved Ranum's prediction true.

Three years ago, Gartner Vice President and Research Fellow John Pescatore also predicted the emergence of a basic network security appliance as he witnessed security vendors combining and collapsing into a single market.

Known today as ISGs (integrated security gateways), next-generation firewalls, and UTM (unified threat management) systems, these products are less expensive than purchasing individual components and easier to administer.

In its 2007 Security Trends report, enterprise IT researcher the Burton Group cites vendors are increasingly turning to building converged perimeter devices. Organizations can no longer afford to maintain a security infrastructure composed of multiple, independent, and disparate point solutions. Additionally, the evolving threatscape of blended attacks calls for security products to be able to operate in unison to effectively detect and mitigate new attack vectors.

But Ranum warns that vendors need to be cognizant as to the quality of the products and services being bundled together. "When vendors have a bad acquisition strategy, they end up with some products that are good and some that are mediocre," he says. "Vendors build a portfolio of products—some of them are first-rate, second-rate, third-rate, and off the charts in terms of stuff that is really bad. Unfortunately, that's where we're heading toward with some of these things."

Symantec's multifunction security appliance line (www.symantec.com) has already become a casualty. Unable to capture the enterprise market with its SGS (Symantec Gateway Security), SNS (Symantec Network Security) 7100, and SGS Advanced Manager 3.0 appliances, last year it laid off the staff of its security appliance division. For existing customers, Symantec said it was reducing its investment in its appliances and vowed to continue development of the underlying technologies and support the discontinued prod-

uct and will focus on the security services market instead.

The successful multifunction security appliance vendors are typically ones that have started with core perimeter security services such as firewall, IDS/IPS, and VPN. As a builder of firewall and IDS software, Ranum says, "If you look at what a router, firewall, and IDS do, they are looking at traffic on the wire and putting it back out. There's not much additional code needed once you have your packet inspection layer code written, and from there it's not hard to add components. As soon as you add Layer 7 processing, it's not a big jump to build in Web load balancing, too. While you're doing that, you might as well make it a Web firewall and monitor port 25 to look for spam, spyware, and phishing scams."

Another option many vendors turn to for providing multiple functionalities is by licensing existing solution providers' technologies.

Let's take a look at some of the leading solutions.

WatchGuard

The Firebox X Core e-Series is available in three different models (X550e, X750e, and X1250e). The entry-level model provides up to 125Mbps of firewall throughput, four 10/100 ports, one branch VPN tunnel, and five mobile user VPN tunnels. The high-end model offers 300Mbps, eight 10/100/1000 ports, 400 branch office VPN tunnels, and 400 mobile user VPN tunnels.

In addition to the core security features (firewall, VPN, IDS), WatchGuard offers several different optional features (IPS, antivirus/antispyware/antispam, WebBlocker URL filtering) along with Fireware Pro software, which is an advanced operating



SNAPSHOT

WatchGuard FireBox X Core e-Series UTM Bundle

Starts at \$1,459

A UTM platform with core functionalities of a dynamic stateful packet firewall, IPsec VPN, Intelligent Layered Security, and zero-day attack prevention

www.Processor.com/WatchGuard

system for more complex networks that provides active/passive high availability, dynamic routing, traffic management, and load balancing. Recently, WatchGuard introduced the UTM Bundle, which are all the optional features included in a single license.

ZyXEL

ZyXEL delivers comprehensive protection through eight dedicated security services on each of the three models (5/35/70) of its ZyWall UTM appliances. All include the SecuASIC Advanced Accelerating Network for performance enhancement using an additional Turbo Card.

ZyXEL provides a stateful packet inspection firewall, NAT traversing IPsec VPN, load balancing, bandwidth management, and IDS. Kaspersky Lab's antivirus engine (www.kaspersky.com) defends against malware such as viruses, Trojans, and worms;



SNAPSHOT

ZyXEL ZyWALL 5/35/70 UTM Series

Starts at \$549

An eight-in-one security appliance built on the SecuASIC accelerating technology

www.Processor.com/ZyWALL-70UTM

Mailshell (www.mailshell.com) powers the antispam filter; and content filtering is performed through a partnership with Blue Coat Systems (www.bluecoat.com).

SonicWALL

SonicWALL's PRO Series gives IT managers six models from which to choose. Covering everything from small business to medium-sized enterprises, all the SonicWALL PROs include the SonicOS, unrestricted user nodes, firewall, and VPN. An



SNAPSHOT

SonicWALL PRO Series (4060 model shown)

Starts at \$995

Covers firewall, VPN, WLAN services, quality of service features, and VoIP security standards, in addition to real-time antivirus, antispam, and antispyware gateway protection

www.Processor.com/SonicWALL-PRO

additional security bundle that provides gateway antivirus, antispyware, and IPS is also available on an annual subscription service.

Multiple SonicWALL PRO devices can be centrally managed through either a Web-based interface or through SonicWALL's Global Management System that allows security administrators to centrally push out policies and collect logging information.

Juniper

Juniper's NetScreen line is an enterprise-class, network security solution combining UTM security features including IPS, antivirus, antispyware, anti-adware, anti-phishing, antispam, and Web filtering to provide in-depth defense against worms, spyware, malware, and other zero-day attacks.



SNAPSHOT

Juniper Networks NetScreen Appliances

Starts at \$900

Offers perimeter security with multiple DMZs, VPNs for wireless LAN security, and protection of internal networks for branch and remote offices

www.Processor.com/Juniper3

Like many other all-in-one security appliance vendors, the technology under the hood isn't all proprietary. The antivirus is based upon the Kaspersky scanning engine, Symantec provides spam blocking, and SurfControl (www.Processor.com/SurfControlPLC) delivers Web filtering.

Juniper's core technologies—firewall and VPN—deliver robust and granular features such as multiple restricted security zones, both wired and wireless; redundancy and high-availability; and centralized policy-based management.

Check Point

Check Point has recently introduced its UTM-1 appliances. Three models (450, 1050, and 2050) streamline firewall, IPS, and antivirus/antispyware along with an IPsec VPN and centralized management for real-time updating, monitoring, and reporting. There is also an optional SSL-based Web security and remote access tool. Check Point also moves into the space of securing (and blocking) VoIP, instant messaging, and peer-to-peer applications.

Check Point's UTM-1 is backed by its SmartDefense Services, which include real-time updates against the latest threats and configuration advice including best practices, advisories, and malware/spyware research.



SNAPSHOT

Check Point UTM-1

Starts at \$7,500

Includes a stateful inspection firewall, IPsec VPN, gateway antivirus and antispyware, and intrusion prevention in addition to a Web application firewall

www.Processor.com/CheckPoint3

Fortinet

For those organizations wanting to call in the big guns, the Fortinet FortiGate 3600A cranks out substantial fire power against the latest blended security threats. This ASIC-based appliance delivers 6Gbps of stateful firewall throughput, 400Mbps antivirus/spam protection, 5,000 dedicated IPsec VPN tunnels, IPS, Web content filtering, and up to 50,000 unique policies for up to 1 million concurrent sessions.

A modular architecture lets new technologies such as instant messaging, peer-to-peer, and VoIP be quickly integrated without expensive and complicated upgrades. Besides standardized logging and reporting, FortiGate includes data archiving for regulatory compliance, trending, and creating baselines.



SNAPSHOT

Fortinet FortiGate 3600A

Starts at \$32,995

An enterprise-class high-performance appliance providing firewall, VPN, IPS, antivirus, and content filtering services on an ASIC-based hardware platform

www.Processor.com/FortiGate-3600A

To see Processor Showcase advertisements for products in this category, look online at www.Processor.com and find the Multifunction Appliances ads under Communications/Security.

Buying Tips

- Look for a certification such as Common Criteria, NSS Approved, West Coast Labs, or ICSA Labs.
- Examine the vendor's acquisition strategies; be certain any acquisition technologies are also from reputable products.
- Verify the appliance will seamlessly integrate into your existing infrastructure.

Hosting & Disaster Recovery

www.Processor.com/Dataside3



FEBRUARY 23, 2007

Dataside, the premier provider of custom data center space for enterprise installations, has six data centers in Dallas, Austin, and Las Vegas. Dataside uses a unique carrier-neutral access model and offers the highest levels of security and reliability in top-tier facilities.

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- Made in the U.S.A.

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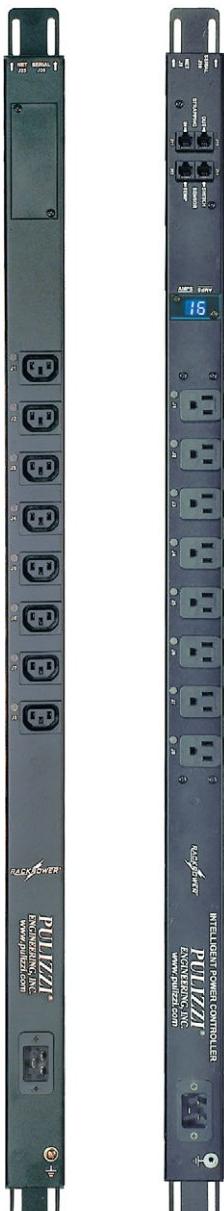
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Heat Or Hype?

How Big A Problem Is Data Center Heat?

by David Garrett

IS IT HOT IN HERE, or is it just us? As blade servers and high-powered storage become more common, data centers are warming up—enough to make the president take notice. Recently, President George W. Bush signed legislation asking the EPA to study how data centers use energy. Others, including vendors of cooling technologies, have called the problem a crisis. But is it?

"I would say that it is a crisis for some customers," says Mike Hagan, vice president of Lee Technologies (www.Processor.com/LeeTechnologies) and an expert in data center design. (Lee's client list includes marquee names such as Geico, Home Depot, Lucent, Nextel, and Office Depot.) "It's becoming a major concern for most," he adds.

It's also becoming a source of innovation, according to Lisa Raffin, vice president of professional services with VFA (www.vfa.com), a leading facilities management firm. Raffin believes the problem is creeping up to crisis levels, but its solution could leave us with everything from better, renewable sources of energy to smarter, more efficient servers. In IT, crises often become catalysts for invention. "History has shown that these are not false alarms," says Raffin, "and that we will make significant advances in building technologies as a result."

What's Causing It?

The outlook for the next few years is a warm one, in part because Dell (www.dell.com), HP (www.hp.com), IBM (www.ibm.com), and others have invested

billions to develop ultra-dense blades and expect a return on that investment. "They need to sell a lot of blade technology," says Blake McLane, vice president of strategic business development at colocation provider CyrusOne (www.cyrusone.com). He notes that server manufacturers can push the adoption of blades by cutting support for older models.

But McLane also believes that blades and business cycles aren't the only problem, or even the root problem. Indeed, newer systems consume less power and throw less heat than older, equally dense models. And most data centers have enough cool air to chill things out.

So what's the problem? Airflow. Like a damaged heart, most data centers suffer from poor circulation; the cool air they have is dammed or pooled or badly distributed. One solution is modular cooling that can be configured—or reconfigured—to match a data center's changing needs, much as CyrusOne does in existing



McLane. And while CyrusOne's center is a Tier 4 facility, even smaller data centers can benefit from its approach, largely because they've grown in what McLane calls "an evolutionary way." Over time, they replace old servers with new or add servers as computing power is needed.

President Bush signed legislation asking the EPA to study how data centers use energy.

centers and plans to do in a new 60,000-square-foot data center to be built in Houston.

"We've designed the power and cooling structures in a very modular way," says

Thus older, less dense systems exist side by side with clusters of highly dense machines that result in hot spots.

With a modular system, CyrusOne can push cold air to the places that need it. "We're able to concentrate the distribution of airflow and CFM specifically to the zones that require it," says McLane.

The Right Planning

Hagan of Lee Technologies says the heat problem leads data center managers to pay for solutions they may not need. "It's very easy to become enamored with high-end technologies and software and applications. They're flashy," he says.

But preventive maintenance on your current cooling equipment, a distinctly unsexy job that's often ignored, may give you enough cool air to cope with the servers and storage you have now. Even better is careful planning, especially if you're building from scratch.

"When you're in a new environment, if you're able to build a deep enough floor

plenum, keep floor obstructions to a minimum, take advantage of hot aisles and cold aisles, and provide the proper cooling structure, you can meet pretty rigorous needs with what I would call conventional cooling methodologies," says Hagan. "The challenge comes when you're looking at existing clients."

If you can't build from scratch and you're coping with high heat and higher cooling bills, an approach like the one taken by VFA might be useful. "The first step is to establish a baseline of the current condition," says VFA's Raffin. Finding a baseline involves a cooling audit to determine everything from capacity to latent and sensible loads, which "helps identify design vs. equipment issues, as well as other energy savings opportunities," she adds.

Next up? A plan for the future. Raffin believes it's every bit as important as looking at current problems because there are few business needs in today's high-tech landscape that won't demand computing power, whether it's a week, a month, or a year from now. And whether you'll need servers for 10 users or 10,000, there's no time like the present to start planning.

Planning, Talking & Planning To Talk

Planning for a cooler future is not as easy as it seems. All too often, companies fail to estimate how much cooling they'll really need and presume they'll get five to seven years out of a cooling system that only covers their needs for the next 24 months.

"Not having a crystal ball and not knowing what to invest, the alternative is you overbuild and don't use it," says Blake McLane of colocation provider CyrusOne (www.cyrusone.com). "And your financial folks don't like you taking all that depreciation every year when you're only running at 30 or 40% capacity," he adds.

Better planning can help—providing the lines of communication are kept open. "IT personnel are quickly adding high-density equipment without having a solid discussion with their facilities management people," says Mike Hagan of Lee Technologies (www.Processor.com/LeeTechnologies). And when the IT staff adds equipment without keeping the facilities group in the loop, problems are sure to appear.

Processors To The Rescue?

Power supplies, hard drives, and processors. All three get hot, but a new wave of processors could help solve the heat problem in data centers.

"Intel [www.intel.com] is developing what's called the low-voltage (LV) processor to provide low power consumption," says William Huang of Area Electronics Systems (www.areasys.com), which makes servers and storage products. "The power consumption and

also the power efficiency itself are getting much better, with much better numbers coming out."

But there's a trade-off. "If you're using a lower-power consumption processor, the speed is not as great as the standard ones," adds Huang. He also notes that processors and components, already measured on a scale of nanometers (one nanometer is a billionth of a meter), are

shrinking even smaller, which lower their power consumption even further.

As the components on chipsets grow smaller, there's more room for the cache, which improves speed as it grows. "Cache size has grown from 512 to 1MB to 2MB on the Xeon," says Huang, noting that Intel's next-gen Woodcrest includes a generous 4MB of L2 cache.

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Trends In Servers

Continued from Page 1

for profit, such as developing new tools, services, and add-ons.

"One of the biggest issues in the future of the data center is capacity planning, and virtualization can help with that," says Gartner analyst George Weiss. "Any type of server development or deals that boost virtualization will be appreciated by users, which will spur even more shifts in that direction."

The Multicore Influence

Many server vendors that are focused on the traditional rackmount arena or offer blade systems are keeping an eye on multicore CPUs as they become more prevalent. Verari Systems' (www.Processor.com/VerariSystems) Chief Technology Officer David Driggers notes that multicore CPUs are likely to be the biggest influence on how his company develops new technologies.

According to Driggers, computers are becoming much more powerful with multicore, leading to the boom in virtualization and driving increased utilization of those efficiencies. This rise in processing power will give SMEs more flexibility in how they use computers and servers, Driggers says.

Multicore made a splash last year as Intel (www.intel.com) rolled out a quad-core

processor, and AMD (www.amd.com) quickly announced its own rival processor, due to ship in the middle of this year. Sun Microsystems (www.Processor.com/Sun) rolled out its 8-core Niagara chip and wasted no time in developing Niagara 2, due out later this year. Experts have noted that it will take time for this type of product announcements to translate into changes in the data center, but the innovations are likely to spur shifts in server utilization in the near future.

Licensing Changes

As multicore processors become more prevalent, experts believe there will be a continuing shift away from more traditional types of licensing, which are often delivered on a per-processor or per-user basis.

Chipmakers such as AMD, IBM, Intel, and Sun have all trotted out chips designed to increase processing power while lowering heat generation and power consumption, and those vendors have called on ISVs (independent software vendors) to tweak their licensing in response.

Margaret Lewis, AMD software strategy manager, has noted in the past that ISVs should license by the processor, not by the processor core. Some in the industry are moving in that direction, as when Oracle (www.Processor.com/ORCL) tweaked its

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licensing terms to accommodate multicore chips in response to customer complaints.

Blades Keep Coming

Although many companies are still testing the capacity of blade servers and working out how to fit them into their data centers, the technology has been steadily increasing in enterprises of every size.

Some IT managers expressed disappointment in the past that blades hadn't delivered the server manageability and cost savings they'd expected, but improvements

over the past year in blade options are helping to address those issues, says Vikram Mehta, president and CEO of Blade Network Technologies (www.Processor.com/BladeNet).

"By the end of the decade, we think at least 30% of all servers will be blades," Mehta notes. "Just implementing one or two in a data center can have benefits, and that's what people are discovering. Also, server management can sometimes be a nightmare, but blades are very simple to set up and use, so the benefits are significant."

SMEs At The Forefront

In addition to following major server trends, many vendors are also focusing more intently on the small to medium-sized enterprise market, creating and offering customized systems specifically for smaller companies. Here's a sampling of SME-friendly server providers.

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Verari Systems

- Developer of scalable, flexible, platform-independent blade-based systems; options include rackmount servers, management software, storage systems, and professional services

www.Processor.com/VerariSystems

ITSM & ITIL Best Practices

Continued from Page 1

and delivery and infrastructure, software, and security management. (See the "ITIL Components" chart for more information.)

Largely due to its vendor neutrality, ITIL has become the most widely adopted set of best practices and forms the basis for the first international standard for IT Service management, ISO 20000. According to the ISO 20000 standards group, whereas ITIL "is essentially a collection of volumes detailing a number of 'disciplines' and processes for IT Service management . . . ITIL itself does not offer corporate or organizational certification, but rather personal certification."

ITIL has been around since the 1980s, yet Michael Tainter, ITSM practice manager at the Forsythe Solutions Group (www.forsythe.com), notes that while the majority of businesses have budgeted money for ITIL projects, many are still in the early stages. "They're still just trying to figure out what ITIL is," he says.

Benefits

The chief benefit to IT organizations of adopting service-oriented best practices is to work smarter and more efficiently, says Mart Rovers, president of InterProm USA (www.interpromusa.com), a business service management consultancy. Forsythe's Tainter concurs, noting that because ITSM aligns IT processes to overall business goals, companies gain "higher productivity from both business and IT staff." He also notes a tangential, but potentially significant, advantage of an ITSM approach, namely that it "allows IT staff to be more innovative in their work" because it reduces the amount of unplanned, reactionary "firefighting." Rovers adds that the streamlined operations resulting from ITIL-proscribed processes improves customer satisfaction and that more structured IT processes also serve to reduce hardware and licensing costs because they lead to tighter management of IT assets.

Barriers To Adoption

According to Rovers, perhaps the biggest barrier to the adoption of ITIL processes is a lack of visibility; many of his potential customers "have no clue" of these service-oriented best practices: "It's a big unknown," he says. Once this awareness hurdle has been vaulted, he contends the

tough work of an IT leader is mapping these processes to the people within an organization charged with implementing each process ("the who") and to the tools required for implementation ("the how"). According to Tainter, one of the primary tasks of an ITSM champion is justifying an effort that features benefits that aren't easily quantifiable (for example, improving "soft costs" such as productivity or customer satisfaction that can't easily be translated into a hard ROI figure).

Getting Started: Preparation

Any IT manager contemplating introducing ITSM concepts to his organization should start with some introductory training. Rovers suggests several options from reading a primer such as the "Introduction to ITIL" or attending an onsite executive summary from a qualified consultant to sponsoring an in-depth workshop where an expert conducts a company-specific review of IT processes. He also suggests managers attend local user-group meetings of the ITSM Forum (itSMF International; www.itsmf.org) to pick up tips and network with others utilizing ITIL best practices.

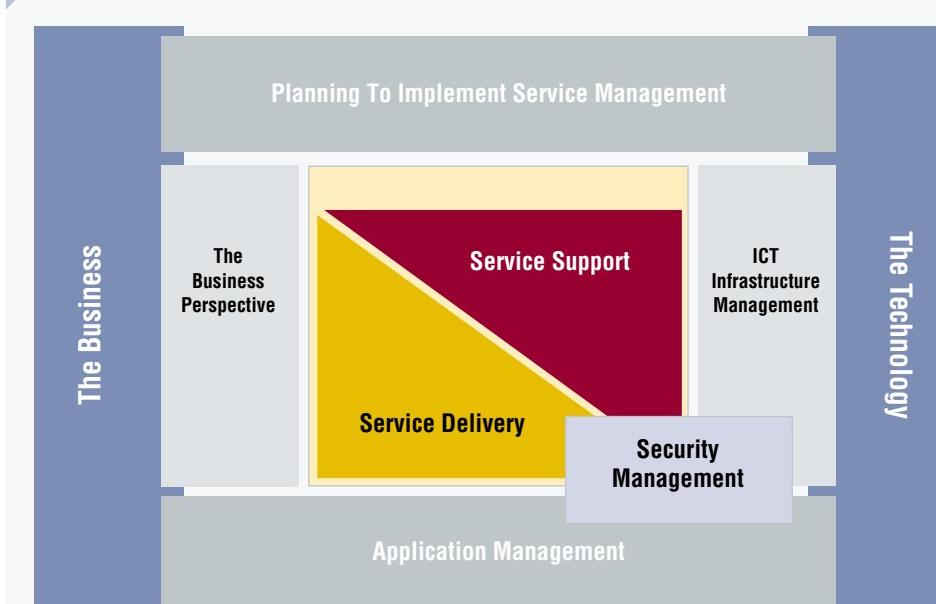
Forsythe's Tainter points out those initial steps should also include performing an assessment of an IT department's existing processes to gain an understanding of how they can be aligned with ITIL best practices. Subsequent to the assessment phase, he recommends developing a roadmap that

identifies specific projects to implement ITIL practices. He recommends incident management as the best starting point because it is one of the most critical IT processes and can demonstrate a "quick win" for any new service management initiative.

Rovers notes that a good ITIL implementation should produce benefits within three to six months—much longer than that, and "you're doing something wrong," he says. Rovers recommends defining a process manager position to focus transition efforts independent of day-to-day operations—as, he says, "a process manager manages work; a line manager manages people." Both Rovers and Tainter agree that consultants can provide needed ITIL expertise and assistance in workshops, tool selection, project management, organizational change, ISO 20000 certification, and interim, temporary staffing.

Standard IT best practices can enhance an organization's effectiveness, but, according to Forsythe's Tainter, the critical aspect of any IT service management effort is to ensure that "services, processes, organization, and tools are all aligned." He also stresses that "ITIL is not an end game; it's a journey for the rest of the organization's life." It's not a single project but a series of projects spread over time. It's part of a "culture change" that aligns IT with business direction—a change that, while often painful, can significantly enhance IT's value to the company as a whole.

ITIL Components



The IT Infrastructure Library is a vendor-neutral set of best practices outlined in a series of books organized into several major disciplines.

The ITIL Framework includes:

1. IT Service Management
 - a. Service Support
 - b. Service Delivery
2. IT Operational Guidance
 - a. Security Management
 - b. Information and Communication Technology (ICT) Infrastructure Management
 - c. The Business Perspective
 - d. Application Management
 - e. Software Asset Management
3. Planning Guidelines
 - a. Planning To Implement Service Management
4. ITIL Small-scale Implementation

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A Look At Server OSes

Which One Is Right For Your SME?

by Chris A. MacKinnon

WINDOWS OR LINUX? Solaris or OSX? How about BSD? With so many choices, it can be tough to decide which operating system is best for your small to midsized enterprise. Gartner's wisdom may make your choice a bit easier. The information and technology research and advisory firm says Windows and Linux are the only two "growth" operating systems that it sees in the server space. While this may ring true for some, others would altercate Gartner's analysis.

Windows, Linux & Others?

Jared Giles, vice president of product management at Open Source Systems (www.Processor.com/OpenSourceSystems), on the other hand, says when we examine why Windows and Linux seem to be the only two that are growing, he would respectfully disagree.

Giles says Sun Microsystems (www.Processor.com/Sun) has made quite a few inroads lately. He notes, "With their most recent announcement to integrate Intel chips into their servers, this provides a huge cost benefit to their base. Sun's open-source contributions and a sudden willingness to listen to their customers will give them a great deal of improvement in their market share. Apple has also created compelling server offerings that have slowly gained traction with their Unix-based OS X." He says BSD will always have a space due to its superior TCP stack. "While they may seem more obscure as an OS," Giles says, "many enterprise products from Citrix [www.Processor.com/Citrix] to Network Appliance [www.Processor.com/NetworkAppliance] use BSD as their base for their hardware offerings."

Regarding Windows, Giles says, "Windows is a relatively cheap operating system that performs adequately in the server space and excels at ease of use. It offers developers a variety of tools like their dot-

net framework, while it forces people to use Microsoft [www.microsoft.com] products; [it] also has been very influential in the world of the Web. But for small businesses, it offers a comprehensive set of utilities that is easy to use and manage."

Giles says because there are millions of small businesses, Windows will always have a place in business. He says Linux has always been on the verge of breaking out in a big way, from IBM's (www.ibm.com) multibillion-dollar investment to Oracle's



(www.Processor.com/ORCL) embracing of Linux with its "Unbreakable" distribution.

Giles says, "The market leaders have certainly put forth an effort to support Linux. Linux offers a lower-cost alternative in the small business market but lags in the ease of use or the perception of ease of use. Many

Gartner says Vista has potential because it will provide users with more control over what gets installed based on the final role of the product.

people unnecessarily fear the CLI (command line interface). The CLI has become less intrusive as open-source utilities replace many of these functions with Web, Java, or application interfaces. They do require more research to find and implement."

But if Gartner's analysis is correct, what's happening to the other OSes? Simon

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Crosby, CTO and founder of XenSource (www.Processor.com/XenSource), says historically, x86 has supported the growth of Windows and Linux, but the tremendous growth of the x86 server market has been at the expense of RISC/Unix operating systems. Crosby says, "It will be interesting to see how Solaris 10 on x86 is received, especially when Sun Microsystems ships the Xen hypervisor as a major component."

The Secret

So what's making Windows and Linux better? Crosby says, "It's a consequence of the growth of the x86 marketshare, not a consequence of one or two OSes being better than the others." For Windows, Giles says Microsoft is focusing on its weakest point (security) while it improves its strengths, ease of use, and a decent TCP stack. "They are also promising a better use of 64-bit applications and multithreading of applications," he says.

"Linux, on the other hand," Giles continues, "is making kernel changes to make it easier to write and use drivers to interface with hardware devices. It has also improved on the user interface significantly through the KDE and Gnome projects. Linux has also specialized in the appliance market, offering single task abilities to maximize the performance of a server by only loading what is necessary for the tasks that it has been assigned."

Enter Vista

According to Gartner, Windows Vista has potential because it will provide users with more control over what gets installed

based on the final role of the product.

Giles says the importance of this is to maximize resources. He says, "When you have a machine that is basically all or nothing or has many unnecessary features, you are wasting resources such as RAM and hard drive space. By simplifying tasks, you are empowering

system integrators to create simple Windows appliances that perform better."

Gartner also expects an increasing number of hybrid environments. Crosby says he agrees with Gartner. He notes, "Over 50% of users we speak to (from SMB on up) have mixed environments. Additionally, Microsoft is aggressively promoting the use

of SuSE Linux as part of its agreement with Novell [www.novell.com]. The most recent Novell quarterly report indicates that Microsoft is distributing tokens for SuSE support at a rate greater than originally expected. This can only increase the profile and customer confidence of Linux across all sectors of the market." □

Here Come The Hybrids

Gartner is saying that it expects an increasing number of hybrid environments to enter the server OS space. Joe Toste, vice president of sales and marketing at Servers Direct (www.Processor.com/Servers-Direct), and Jared Giles, vice president of marketing and product management at Open Source Systems (www.Processor.com/OpenSourceSystems), give their perspectives on the coming hybrids.

Toste says Servers Direct sees that the adoption of hybrid environments will only increase as server applications continue to mature. He says the following market vectors are coming together to support this view:

- The quantum leap we are taking in performance in server CPU technology from Intel and AMD.
- As many of these technologies mature, the market use will focus on specialization of applications, where the server market understands what runs better on a Linux distribution than Microsoft Server 2003 server. The growing acceptance of Linux for specialized functions (better security, superior SQL database performance) makes the adoption of hybrid environments easier.
- It is less expensive for customers to keep an application on an environment rather than port a large Unix application environment to, say, a Microsoft server. Minimally, the hybrid OS environments let users migrate this transition at their own pace.
- In the whitebox server market, the adoption of blade chassis and rack units that can accommodate multiple server boards make this adoption easier, as well.

Giles says Microsoft is moving in the hybrid direction by working to create OpenXML for Windows. He says Microsoft is working with the Open Document Format community, and whole governments are switching to this format.

Commercial software also has its place. Giles cites Linux, saying the OS needs to show that it is not anticommercial; Oracle, noting that it has a first-rate commercial database; and open-source products such as MySQL, which Giles says also have commercial alternatives.

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Setting Sights On Storage

An Inside Look At Today's Top Storage Trends

by Christian Perry

FUELED BY REGULATORY compliance, disaster recovery, and the ever-increasing need for overall business continuity, storage has grown from a wayside necessity to a top priority that's spawning powerful, flexible technologies that are impacting enterprises of nearly every size.

"We are really moving from a goods-based economy to an information-based economy," says Jame Ervin, technical accounts manager for StoneFly (www.Processor.com/StoneFlyNet). "With this change, people are constantly collecting information, mostly in digital formats. . . . With the explosion of email, online content and media, and digital record keeping and archiving, organizations are struggling to manage internal and external content."

As a result, Ervin contends, technologies driving the market today are primarily targeting improvements to data management, effective utilization of storage space, easy expansion, and ease of administration. Further, technologies that focus on centralizing data, classifying content, and analyzing content should see explosive growth, he says.



With systems such as Pillar Data Systems' Axiom 500 (www.Processor.com/Pillar), enterprises previously unfamiliar with tiered storage environments can get up and running with little hassle.



Focus On IP

Although it's no surprise that many experts point to technologies such as iSCSI, CAS (content-addressed storage), and the continuing evolution of NAS as dominating trends in today's storage market, it's notable that these same voices see the technologies as complementary. In particular, the immediate future for IP-based storage, including iSCSI and its various renditions, looks bright.

"The small and medium business markets are demanding more and more manageable storage options," says Stanley Chan, product manager at Sans Digital (www.Processor.com/Ily). "Traditionally, SMBs do not have enough resources to set up a storage network, but there are substantial requests for more reliable storage solutions due to various government regulations. NAS and iSCSI are great solutions for this type of environment. Compared to a Fibre Channel storage-area network, IP-based storage does not require a team of storage experts."

Yet the issue isn't quite black and white across the board because enterprises are finding ways to implement variations of the technologies that use the best aspects of each. "iSCSI may not replace Fibre Channel for now, but it's a perfect complement to FC because of its affordability and ease of deployment and installation using the existing infrastructure," says Steven Huang, marketing manager, Enhance Technology (www.Processor.com/EnhanceTech).

Security is another factor weighing heavily on the minds of IT managers, and CAS products such as Nexsan's Assureon (www.Processor.com/NexsanTech) are helping enterprises securely manage data in a plug-and-play fashion. However, overlap could occur between NAS and CAS systems, according to Mo Tahmasebi, CEO of DNF Storage (www.dynamicnetworkfactory.com), who says that because NAS is already managing files, it seems logical to surmise that the technology will become more intelligent about the content of the files.

"We should soon see integrated content management/NAS systems or NAS/search appliances," Tahmasebi says. "Serving the files will be equally as important as finding and retrieving information; otherwise, NAS will become more powerful as a storage management appliance, and the operating systems will improve to handle large numbers of files and share efficiently."

Like others, Tahmasebi says he expects this year to show extensive growth in IP SAN deployments but that the applications will differ from initial expectations. Thanks to improvements in hardware and software, iSCSI should move more into the realms of desktop and thin-client applications. However, he says that while 10Gbps IP SANs will be common later this year in the mid- and high-range markets, the lower end will predominantly feature iSCSI DAS (direct-attached storage) systems, but they won't offer services such as virtualization and replication.

Serving Up Storage

Storage services are appearing as an increasingly attractive resource for today's enterprises, but it wasn't always that way, according to Jay Kramer, vice president of worldwide marketing, iStor Networks (www.Processor.com/iStorNetworks). Not long ago, storage services were hyped as a new "killer app" called SSPs (storage service providers) that were created to address the dot-com Web server model, but when the dot-com bubble burst, expensive SSP solutions went with it.

"Now that high bandwidth is available at attractive price points and highly secure virtualized SANs have advanced, we are seeing cost-effective ways for customers to buy solutions that deliver on the promise of quality of storage services," Kramer says. "These applications are being driven by the demand for business continuity strategies and long-term protection of information assets under the umbrella of information lifecycle management."

According to Ervin, network administrators, system administrators, and even regular users are increasingly handling the duties

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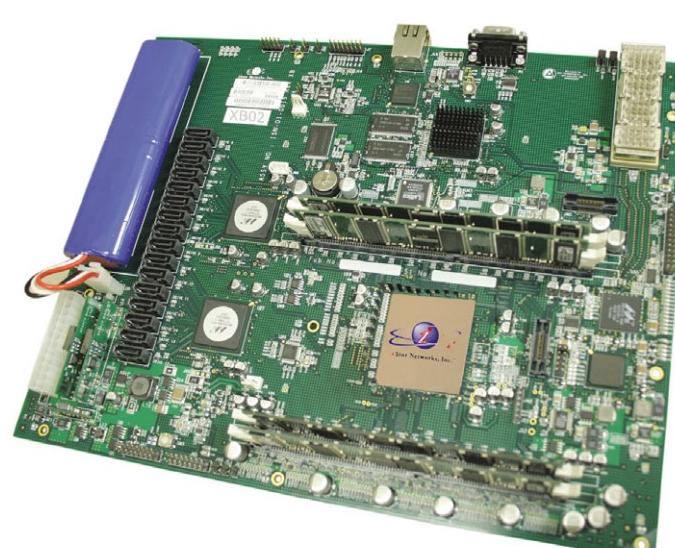
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Tiered Approach

The ability to move crucial data efficiently and securely has boosted the value of storage services, but as the amount of all data continues to mount, concern is also rising about stale data. As such, there is now more demand for systems that can transparently move data, and Ervin notes that there's no need to delete something that might be needed in the future. "Saving a file indefinitely is much easier than keeping it in a file cabinet," he says. "The feature of moving data transparently is especially important for organizations that employ tiered storage philosophies—if the information is kept on high-priced media and not being used, you are wasting your resources."

The emergence of streamlined storage products makes the transition to a tiered



IP-based storage products, such as iStor's 10Gbps iSCSI controller (www.Processor.com/iStorNetworks), are quickly growing in popularity, according to industry experts.

architecture easier than ever, even for enterprises unaccustomed to the technology. For example, the Axiom 500, from Pillar Data Systems (www.Processor.com/Pillar), places all tiers of data on a single platform that allows companies to deploy a NAS-only system, a SAN-only system, or a combination of both.

The cost savings involved with tiered storage environments can be significant, particularly if enterprises were previously using higher-priced equipment for all data, whether it was regularly accessed or not. "At the end of the day, the customer can implement an automated system that manages data assets optimally based on the most appropriate data classification for each specific business application," Kramer says. □

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Product Releases

PHYSICAL

HVAC

■ **Emerson Network Power** unveiled the Liebert TCDV, an air-cooled, direct-drive refrigeration condenser designed to help users maintain Business-Critical Continuity when using Liebert precision cooling systems. The unit also employs digital scroll compressors for more precise cooling. Another notable feature is the device's ability to suppress transient voltage surges.

COMMUNICATIONS

Content Networking

■ **Stonesoft** announced the release of StoneGate Multi-Link, a new connectivity product. Multi-Link lets companies work with any type of Internet connection, including enterprise-based connections for ensuring connectivity clusters. Stonesoft says Multi-Link offers a solution to more expensive point-to-point products such as MPLS (Multiprotocol Label Switching). Multi-Link, which also offers load-sharing functionality, is part of StoneGate, a unified centrally manageable system that uses deep network security and assured end-to-end availability.

Network & Systems Management

■ **Fluke Networks** introduced an updated version of its DTX CableAnalyzer cable tester. The new version is capable of validating twisted-pair cabling links that use PoE controllers, such as those interfacing

with VoIP phones, wireless access points, and security cameras. Network administrators can use the DTX CableAnalyzer to ensure the PoE devices are working properly before integrating them into the system. Existing DTX CableAnalyzer users can upgrade their existing units free of charge.

• • •

■ **Netcordia** introduced the NetMRI 2.0 network analysis appliance. This appliance has more than twice as many built-in rules as the previous model did. NetMRI 2.0 can monitor and analyze more than 150 configuration and QoS issues that may occur within a network. Among NetMRI 2.0's new rules are a set for Routing Neighbor Analysis and a QoS module that detects queue performance data. NetMRI is available in many configurations, including those for networks with less than 50 routers, switches, and firewalls and those for networks with more than 20,000 routers, switches, and firewalls.

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■ **Tandberg** introduced FieldView, a high-res mobile video system that provides the capability for remote workers to visually collaborate and troubleshoot problems in the field with centrally located experts. FieldView is a wireless handheld device that transmits detailed video streams to remote locations to communicate in real time. The system includes built-in two-way VoIP and one-way video transmission. Data is transmitted via wireless 802.11b/g networks. A FieldView PC application lets administrators control the device remotely. The device, which can also take still

images, will be available in the United States next month.

Security

■ **Cisco** describes its new Secure Wireless Solution as an architectural design based on the company's Self Defending Network framework. For both wired and wireless networks, the Secure Wireless Solution supports security applications such as IDS, IPS, client validation, firewall, single sign-on, and more.

• • •

■ **Crossroads Systems** announced that it is starting the early adopter phase for StrongBox DBProtector 2.0, its network appliance. The system protects against "authorized misuse" of database information and enhances regulatory compliance. Via a policy engine, forensic technology, and an automated audit reporting feature, DBProtector 2.0 fortifies regulatory compliance. The appliance supports Microsoft SQL Server 2000/2005 and offers backup and restore capabilities, as well as an enhanced policy engine that offers SQL traffic analysis and forensics. It also features NAS integration and has a baseline report that lets users create profiles of their database activity. Crossroads Systems plans to release DBProtector 2.0 to the public in April.

• • •

■ **PC Guardian** has announced the USB Port Security System, which protects companies from unauthorized access to its data. This product locks and blocks a system's USB ports. It also locks authorized USB devices' cables into the USB ports.

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Configurations are available to support between one and seven USB ports. Prices range from \$12.95 to \$71.95.

• • •

■ **Reflex Security** and **Virtual Iron Software** announced the Reflex VSA (Virtual Security Appliance) that's designed for Virtual Iron's virtual infrastructure environment. The Reflex VSA works as a virtualized appliance inside a virtualized environment to detect and mitigate threats between virtual hosts and networks; Virtual Iron is an enterprise-class server virtualization and virtual infrastructure management platform. Reflex VSA provides a virtual intrusion prevention solution for virtualized network environments. Reflex VSA adds a layer of protection inside the virtualized network to detect and prevent threats, such as DoS attacks, virus and worm propagation, and access violations.

• • •

■ **Vernier Networks** released a Release 6.2 software upgrade for its EdgeWall 8800 appliance, which gives users the ability to monitor and enforce desktop- and network-usage policies. The upgrade is free to companies with current service contracts and includes an enterprise-wide, command-and-control dashboard, which gives security administrators automatic alerts concerning security breaches while enforcing real-time policy compliance. With the upgrade, the EdgeWall 8800 can identify by name the top offenders of corporate policies, including those who introduce malware and spyware.

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Going Outside The CRYPTO-BOX

MARX Adds New Feature To Its Protection Kit

by Sixto Ortiz Jr.

• • •

MARX IS EXTENDING its CRYPTO-BOX Professional Protection Kit with Document Protection technology, providing businesses with an effective way to protect and distribute digital documents that goes beyond mere password protection.

MARX's CRYPTO-BOX implements the AES/Rijndael encryption algorithm in a small hardware key that connects to a USB, serial, or parallel port. The company's Document Protection technology uses the CRYPTO-BOX's hardware-based encryption capabilities by providing users with a secure way to create and distribute encrypted PDF documents.

The software includes a printer driver called the PDF Converter for creating PDF files and what MARX calls the PDF Protector. The PDF Protector encrypts PDF files, programs CRYPTO-BOX devices, and processes remote update security requests. In that sense, MARX's Document Protection extends the capabilities of PDF by adding strong 128-bit document encryption and document access control.

MARX's Document Protection is available in two flavors: a Distributor's package and an End-User's package. The Distributor's package is designed for content distributors who need to protect electronic documents and consists of the PDF Converter and the PDF Protector. The End-User's package features a PDF Viewer for viewing encrypted PDF files, a CRYPTO-BOX, and an optional remote update utility.

When a PDF document is created using Document Protection, only the user with the valid CRYPTO-BOX containing the correct encryption key can decrypt and view the document. So, MARX's Document Protection implements information rights management and provides digital document developers with control over how a document is used.

Other features include the ability to create multiple authorization levels and document expiration dates. These features allow administrators to limit the amount of time that users can view and manipulate documents or to setup different document usage rights based on varying levels of user authorizations.

Document protection technologies today run the gamut from sophisticated, enterprise-class document management solutions to simpler implementations. Companies developing and marketing

products similar to MARX's Document Protection include WinMagic's SecureDoc (www.winmagic.com), Pinion Software's Desktop Packager (www.Processor.com/Pinion-Software), Liquid Machines' Document Control (www.Processor.com/LiquidM), and others. MARX's solution is an effective and quick way to implement hardware-based encryption and information rights management for document control. □

SNAPSHOT

MARX Document Protection

\$179

Strengthening PDF with hardware-based encryption for document protection and access control

www.Processor.com/Marx2

COMPONENTS

FEBRUARY 2, 2007

Improved Connectivity For Servers & Storage

Mellanox Introduces 4th-Generation InfiniBand Architecture



ConnectX architecture to address the data center need for cost-effective bandwidth, improved quality of service, and protection of an enterprise's infrastructure investment.

ConnectX enables integration of extraordinary levels of functionality into a single adapter chip. It supports eight lane PCI Express v1.1 and v2.0 interfaces as the host

interface. It supports two network ports, and each port can be configured as either a 4X InfiniBand or a 10 Gigabit Ethernet XAUI/CX4 or XFI port. The InfiniBand port supports single, double, and quad data rates.

With ConnectX, enterprises using Fast or Gigabit Ethernet for connectivity and Fibre Channel-based SANs can avoid forklift upgrades as they move to higher performance and unified connectivity options. ConnectX excels in providing stringent levels of services to applications and virtual machines in virtual server environments.

ConnectX offers building blocks for designing server and storage connectivity solutions. Service-oriented I/O ensures scalable and granular QoS for a converged set of data center applications, in both native OS and virtualized server environments. Multiple network and storage connectivity

options on a single ConnectX adapter enhance the server OEM's target markets and time to market. And end users can depend on ConnectX for incremental and demand-based I/O growth and scaling.

Mellanox ConnectX

InfiniBand architecture designed to provide cost-effective bandwidth, improved quality of service, and protection of an enterprise's infrastructure investment

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www.Processor.com/ConnectX



THE GROWING DEMAND for better application performance is driving the increased adoption of clustered servers and server virtualization on top of multicore processors. But connecting these servers in a way that maximizes their performance poses I/O connectivity challenges. Many current solutions are inadequate for the demands of tomorrow's server and storage networks.

Mellanox, known for its advances in InfiniBand technology, has created the

Product Releases

Continued from Page 16

■ **Voltage** released the Voltage SecureMail V3 appliance, which now combats phishing as just one of more than two dozen improvements. It includes Voltage Secure-Mail Gateway and Voltage Key Management Server. Pricing starts at \$55,000 for a single data center.

Video

■ **Polycom** announced the Polycom V700, a complete, all-in-one system with business-quality video conferencing; an integrated display that can double as a PC monitor; integrated camera, microphones and speakers; and content sharing capabilities. The V700 delivers full-screen, full-motion, 30fps (frames per second) TV-like video at up to 768kbps bandwidth speed. It also has Siren 14 wideband stereo audio for near-CD-quality and standards-based H.239 high-resolution content sharing. The system features an integrated 17-inch LCD,

built-in camera, and microphones and speakers capable of delivering 14kHz wideband audio voice quality. The V700 also includes an intuitive remote control and audio prompts in multiple languages for easy use.

END NODES

KVM & Console Access

■ The new MergePoint 5224 and 5240 appliances from **Avocent** allow IT admins to control the service processors inside servers independently of the main processors. This allows better command of alerts, monitoring, and power functions. The new appliances offer one-console control over Linux, Unix, and Windows servers.

• • •

■ **Raritan** announced the eRIC G4, a next-generation KVM-over-IP PCI card for remotely managing servers. The card, which is targeted at system integrators, ISPs, and

multisite enterprises, is aimed at providing improved remote server management capabilities and includes such new features as virtual media support, server health monitoring, and remote power control. The eRIC G4 includes browser-based, BIOS-level access and control for any server, plus access to any attached media. With an Internet connection, IT admins can carry out remote management tasks on servers with an eRIC G4 installed, including setting server passwords, renaming servers, installing OSes, restarting servers, and changing IP addresses. With the device's included virtual media support, admins can also access a server's floppy, CD-ROM, DVD, and hard drives for exchanging files without having to travel to the server. Up to 15 users can view and access a target server simultaneously.

Mobile

■ **HP** launched the latest iteration of its iPAQ smartphone. The iPAQ 500 Voice

Messenger features integrated Wi-Fi, GSM/EDGE, and Bluetooth wireless technology. The device runs Windows Mobile 6 and offers up to six hours of continuous talk time per charge. Other notable features include VoIP and push email capabilities. HP reports that the iPAQ will be available in the spring.

• • •

■ **NextComputing** has announced that its UltraSPARC IIIi processors are integrated into the NextComputing Vigor ULTRA-III line of rugged and portable products. The new products are in a compact chassis and have a flip-down keyboard that covers the built-in 1,600- x 1,200-pixel LCD when the keyboard is flipped up. The Vigor ULTRA-III products also have a pair of 2.5-inch removable IDE, SATA, or SAS drives, integrated or external SCSI storage, and PCI expansion.

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New Spectrum Analyzer Makes A Buzz

BVS Leverages Tablet PC Format For BumbleBee All-In-One System

by Joseph Pasquini

A SPECTRUM ANALYZER is an indispensable tool for investigating and troubleshooting a corporate wireless network. Intended for use by engineers, installers, and technicians needing precise measurements under field conditions, BVS (Berkeley Varitronics Systems) has introduced its BumbleBee-TABLET spectrum analyzer.

The BumbleBee-TABLET is a calibrated spectrum analyzer in a UMPC (Ultra Mobile PC) form factor capable of measuring a variety of wireless technologies, including VoIP, 802.11b/a/g, Bluetooth, WiMAX, cordless phones and video, RFID, and broadband public safety data networks.

Weighing in at only 3 pounds and powered by an Intel Pentium M 1GHz processor running Windows XP Tablet Edition, the BumbleBee features a 7-inch WVGA LCD touchscreen coupled with 1GB of DDR 400 memory and a 40GB internal drive. Interface ports include a 50-ohm SMA connection point as well as a 100MB LAN jack. Four internal AA nickel-metal hydride batteries provide approximately three hours of runtime operation. (Two sets are provided.) An optional 12V automotive adapter is also available.

Advanced spectrum analysis features found on the BumbleBee device include user-selectable power triggers, three pairs of markers, histogram, video

smoothing, and waveform averaging. Tracing features include one live trace and up to four peak-hold waveform traces along with peak hold and peak search. A picture-in-picture mode lets the operator simultaneously view live as well as recorded data. Waveform snapshots can even be saved as JPG files, previewed, and later printed.

Available as an optional accessory, BVS' Honeycomb interference mapping software for WinXP can be run right on the BumbleBee-TABLET analyzer while being utilized in the field or later in the office as a desktop application.

Omnidirectional antennas, covering 900MHz, 2.4GHz, and 5GHz and offering 2dBi of gain, come standard with the analyzer. Optional Direction Finding antenna kits offering 9dBi of gain and covering 2.4GHz and 5GHz are also available for locating and pinpointing specific sources of RF (radiofrequency) energy interference.

The BumbleBee-TABLET is available in two different configurations based upon frequency range. Model 1 supports 902 to 928MHz, 2.4 to 2.5GHz, and 5.15 to 5.9GHz, and Model 2 supports 2.4 to 2.5GHz and 4.9 to 5.9GHz.

While sharing many of the traditional capabilities found in conventional bench-top analyzers such as Agilent Technologies'

N1996A CSA Spectrum Analyzer (www.agilent.com), Rohde & Schwarz's Miniport Receiver R&S EB200 (www.rohde-schwarz.com), and Tektronix's RSA3408A (www.tek.com), the self-contained BumbleBee-TABLET is more appropriately positioned within the same market segment as the Air-Magnet Spectrum Analyzer (www.Processor.com/AirMagnet) in terms of application and features. "The BumbleBee Tablet PC Edition is more suited for a mobile field user who can take this device and literally 'go places' making RF measurements," says Sandeep Natekar, BVS software engineer. □



SNAPSHOT

BVS BumbleBee-TABLET Spectrum Analyzer

Model 1 and Model 2 priced at \$4,500 each, not including optional accessories; Honeycomb interference mapping software is an additional \$2,500

Utilizes Tablet PC form factor for more effective use in the field

www.Processor.com/BumbleBee

Advanced spectrum analysis features on the BumbleBee include user-selectable power triggers, three pairs of markers, histogram, video smoothing, and waveform averaging.

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Data Storage Connection
Storage Networking News And Solutions

Product Releases

Continued from Page 17

Printer

■ Océ introduced the Océ North America Corporate Printing Division's cm3521. At 35ppm, the cm3521 is a mid-volume monochrome and color MFP with a high-speed Auto-Reversing Document Feeder, standard auto-duplexing, direct PDF print, and a maximum capacity of 3,350 sheets. A standard embedded print/scan controller provides both PCL and PostScript printing capabilities, as well as Scan-to-Email, Scan-to-FTP, Scan-to-File/Desktop (SMB), Scan-to-HDD (User Box), and TWAIN functionality. To protect critical data, security features include network authentication, secure print, copy protection, HDD data erase, and IP Filtering. The cm3521 can be equipped with the optional Fiery print controller from EFI.

■ Xerox introduced seven new products, including three color printers, two color multifunction devices, and two fax machines. The color printers are the Xerox Phaser 6360, Xerox Phaser 8560, Xerox Phaser 8560MFP, Xerox Phaser 6115MFP, and Xerox Phaser 6180. The Xerox Phaser 6360 offers speeds up to 42ppm in color and black and white. Networking is standard on all configurations, and a software tool lets administrators charge printing costs to the appropriate departments. PrintingScout software notifies a user at the desktop if a print job fails. The Xerox Phaser 8560 color printer is cartridge-free and prints up to 30ppm with first-page-out time as fast as five seconds. The Phaser 8560 includes PrintingScout software and PhaserSMART and supports CentreWare Web software. The Xerox Phaser 8560MFP adds copying, scanning, and faxing features and can handle multiple functions simultaneously. The Xerox Phaser 6115MFP prints, copies, scans, and faxes. It prints up to 5ppm color and 20ppm monochrome, offers 2,400dpi print quality, and comes with CentreWare Internet Services software. The Xerox Phaser 6180 color laser printer has speeds of up to 20ppm in color and 26ppm in black and white, and it includes PrintingScout software.

New fax machines from Xerox include the FaxCentre 2121 and FaxCentre 2218. The FaxCentre 2121 prints up to 21ppm and can fax in color over the Internet from the device or from a PC. It also prints, copies, and scans to email or the desktop. The FaxCentre 2218 prints at speeds up to 18ppm and comes with features such as PC fax and fax forwarding to another fax device.

Finally, Xerox also announced the WNA-100 Wireless Network Adapter to connect Xerox printers and MFPs with wireless networks. With it, customers can use Xerox software management tools such as PrintingScout and PhaserSMART through the wireless network adapter. Xerox also is launching a compact Integrated Office Finisher for the WorkCentre 7132, a multi-function printer that prints and copies up to 32ppm black and white and 8ppm color. The optional office-quality finisher adds stapling and stacking without taking up additional floor space.

The FaxCentre 2121 will be available March 1; all other devices are available immediately.

Server Appliance

■ Pingtel has launched SIPxchange ECS (Enterprise Communications Server) 3.6, providing ECS functions to the SIP PBX market. SIPxchange ECS 3.6 offers improved voice quality and routes data packets through endpoints rather than the PBX. Polycom HD Voice technology and the HD Voice-equipped SoundPoint IP 650 phone are supported, and SIPxchange 3.6 is also available in an HA (high-availability) configuration for full redundancy.

Storage

■ Dynamic Network Factory released a new 4GB RAID subsystem for small and midsized enterprises. The Enterprise F12-HA offers fault tolerance and active-active RAID controllers, as well as SATA and SAS disk support. According to DNF, the subsystem has 1GB of battery-backed cache per controller and supports up to 12 hot-swappable SAS or SATA drives. Users can also use an on-board connection and a

Keeping The Power On

Entry-Level Battery Backup Units Provide Reserve Power For SMEs

by Tony Bradley

IF THERE WERE SOME SORT of alert or message that was sent out prior to a power outage, you could properly close applications and shut your computer systems down. Unfortunately, that is not how power out-

American Power Conversion has established itself as an industry leader when it comes to power and power management solutions for data centers and computer equipment. Its Back-UPS RS 1300 and Back-UPS RS 1500 model appliances provide a power backup solution for small and

American Power Conversion has established itself as an industry leader when it comes to power and power management solutions.

ages happen. They occur without warning, in the middle of critical data being written to hard drives, and with customer transaction information still in volatile memory. The system essentially crashes, which may have a continued adverse impact on the operating system or applications.

medium-sized enterprises to help their equipment stay powered up during a brief outage or to shut down properly in the event of an extended loss of power.

Chet Lasell, director of public relations for the North American division of APC, describes the products. "The Back-UPS

Product Releases

Dynamic Network Factory Spod 12000 Expansion Array to support up to 45TB of storage. The Enterprise F12-HA has a 2U rackmount chassis and supports RAID 0, 1, 5, 6, 10, and 50. SATA-based configurations start at \$15,000.

Luminex announced the ESCON 8999, a 4-port mainframe Escon-channel HBA (Host Bus Adaptor) with integrated PCI-X connectivity. The ESCON 8999 is designed for compatibility with z/Architecture servers and devices and includes dynamic reconnect and multipathing functions, as well as FPGA-based onboard processors. Luminex will integrate the 8999 into its Channel Gateway products in Q2.

Revinetix unveiled RevOS 2.0, a software upgrade for its Sentio and Volo lines of disk-based network backup appliances. The RevOS 2.0 software upgrade includes support for Microsoft Exchange message-level backup, NAS, expanded Bare Metal Restoration, and broader operating system compatibility. RevOS 2.0 incorporates Revinetix Exchange Agent 1.0 for Microsoft to select and restore individual emails and/or mailboxes from live Exchange server databases based on search criteria. Revinetix Exchange Agent 1.0 will be offered as an option at the time of purchase for any Sentio or Volo device.

Verity Systems launched the Trilogy printer, a 600-disc-capacity, auto-loading disc printing system. The printer houses three OptiPrinter Pro disc label printers. Along with the 600-disc capacity, the three printers enable a continuous printing operation, printing up to 600 discs in five hours. Designed specifically to meet the requirements of professional duplicators, the printers include three spindles that hold 200 discs each and sit on a revolving turntable. The printing process starts as soon as a disc is placed in the printer drawer, and the OptiPrinter Pro uses HP's PhotoREt IV color-layering technology, which controls the placement of six inks.

SOFTWARE

Application & Web Development

Borland's Silk line of ALM (Application Lifecycle Management) testing and quality management products gets a few new capabilities, including Eclipse-based testing for Borland SilkCentral Test Manager, Java Management Extensions monitoring and new Eclipse IDE (Integrated Development Environment) support for Borland Silk-Performer, and support for Windows Vista and other new environments in Borland SilkTest.

Messaging & Groupware

Converse announced the launch of Converse Instant SMS, which combines SMS and MIM (Mobile Instant Messaging) while preserving the successful user experience of each. Built on field-proven, best-of-breed technology, Instant SMS upgrades the existing SMS experience, adding MIM functionalities like presence, mood expressions, emoticons, multiparty chats, and personal messages. Instant SMS can also interconnect with Internet IM users.

SearchInform Technologies announced SearchInform MailSniffer RC, designed to intercept all email traffic on the network protocol level, index the intercepted messages, and enable the user to search through them. SearchInform MailSniffer RC enables the user to conduct quick, quality, full-text searches with due consideration to stemming, thesaurus, and word location in a phrase. The search feature goes through all incoming and outgoing correspondence not only in the body of the letter, but also in its attributes and in the contents of attached files. All intercepted information is indexed and stored into the database, so that the content of deleted messages is available for search. Additionally, the user access rights differentiation system allows for various access patterns.

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RS will defend your PC and A/V equipment from all power threats, keeping your hardware, recordings, and files protected. Advanced multistage surge suppression circuitry prevents surges, spikes, and even lightning from damaging the system," he says. "Battery backup power keeps the PC up and running when the power goes out, thereby protecting your files and recordings from loss. Included PowerChute Personal Edition software will automatically save open files and gracefully shutdown the computer in the event of a sustained power outage."

The Back-UPS RS 1300 and 1500 come with backlit LCDs to share a variety of information, including the voltage in, voltage out, current charge of battery, estimated runtime remaining, and more. With six battery backup outlets per device, they are capable of servicing a number of devices simultaneously. The 1300, with 780 watts of power, is estimated to provide 136 minutes of runtime, while the 1500, at 865 watts, is estimated to provide 154 minutes of power in the event of an outage or interruption.

APC has plenty of competition in the market for uninterruptable power supplies in larger enterprise environments. Products from Staco Energy Products (www.Processor.com/Staco) and Rackmount Solutions (www.Processor.com/Rackmount-Solutions) provide alternatives for higher-end UPS equipment, but SMEs looking for solid power backup solutions have fewer options. Emerson Liebert

(www.Processor.com/Emerson-Liebert) produces the PowerSure PSP line of UPS equipment, which also aims at the smaller markets but does not provide the same power and flexibility of the APC Back-UPS devices. Starting at \$220 and providing up to \$150,000 of insurance protection, the APC Back-UPS RS 1300 and RS 1500 are solid choices for smaller enterprises. □



SNAPSHOT

APC Back-UPS RS 1300 and RS 1500

RS 1300: \$219.99

RS 1500: \$249.99 (pictured)

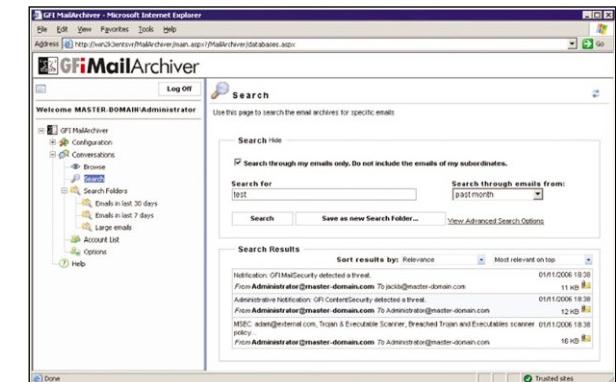
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GFI MailArchiver makes it easy to search for and access emails.

Using GFI MailArchiver, enterprises can reduce reliance on PST files and easily keep up with the latest compliance and legal requirements. The program can reduce email storage requirements by up to 80% and increase Exchange performance while easing backup and restoration.

Network administrators can avoid the pains of PST file management, eliminating corrupted PST files and the lengthy, troublesome process of fixing them. GFI MailArchiver also makes it possible to overcome the risk of PST loss if hardware fails on the employees' workstations.

Employees can use their Web browser to easily locate and access all their emails from anywhere in the world. And a OneClick Restore process makes it easy for employees to quickly restore their emails.

The latest update to GFI MailArchiver, version 4, allows archiving directly to an NTFS drive, with no need to purchase a license for an MS SQL server. Version 4 also features new email retention policies and a Saved Search function so users can save their search requests for repeated use.

Other new features in version 4 include the ability to search within various types of email attachments such as MS Word, Excel, PDF files, OpenOffice, and WordPerfect. Version 4 also incorporates flexible email access control through Active Directory integration, which allows configured users to access other users' archived emails. For example, GFI MailArchiver can be configured to allow a departmental manager to access all his team's email.

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Seven things you need to know about fragmentation – a special report

You know the importance of maintaining system performance and reliability. Your team is the one called to the rescue when systems crash, slow down or freeze. Many of these issues stem from a single, hidden source: disk fragmentation.

1. Reliability issues commonly traced to disk fragmentation:

Crashes and system hangs/freezes; slow boot times and boot failures; slow back up times and aborted backup; file corruption and data loss; errors in programs; cache issues; hard drive failures.

2. The weak link in today's computers:

A computer is only as fast as its slowest component. The disk drive is by far the slowest of the three main components of your computer: CPU, memory and disk.

3. Is automatic defragmentation needed in today's environment?

More than ever! Large disks, multimedia files, applications, operating systems, system up-dates, virus signatures — all dramatically increase the rate of fragmentation. Fragmentation increases the time to access files for all common system activities.

4. Increased server uptime:

Fragmentation can cripple server performance resulting in downtime and lost production. Diskeeper can easily and safely be used on your servers including: file and print, web, domain controllers, SQL, Exchange, and any other database or application servers.

5. Virtualization and fragmentation:

Server virtualization can be used to reduce the number of physical systems for more efficient CPU utilization. However, the disk subsystem must now account for increased disk I/O. Fragmentation is the primary cause of unnecessary I/O overhead. Defragmentation is more important than ever for maximum performance.

6. Hidden scheduled defrag costs:

Scheduled defragmentation is not "free" — it has heavy hidden costs, such as IT time to set and monitor defrag for every system. This results in either staying after hours to defrag, giving the users administrator privileges, break-fix handle, or more often no defrag whatsoever.

7. How do I find out how much fragmentation I have?

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Product Releases

Continued from Page 19

Network & Systems Management

■ **Appian** announced Appian Anywhere, a BPM (business process management) suite available via an on-demand SaaS (software as a service) model. The Appian Anywhere software includes the Appian Enterprise BPM Suite, as well as features for site branding, administration, and application deployment. Appian Anywhere offers full portal, collaboration, and content management capabilities that enable subscribers to build processes, and subscribers can gain access to ready-to-run processes that can be changed to reflect the way users run their business.

.....

■ **CA** announced that eight of its applications and products now support IBM's System zIIP (z9 Integrated Information Processor) specialty engine, making use of zIIP's potential to offload tasks from primary mainframe processors. A few CA products mentioned are the Bright-Stor CA-Vtape Virtual Tape System, Unicenter NetMaster Network Management for TCP/IP, and Unicenter CA-SYSVIEW Realtime Performance Management.

.....

■ **Citrix** released the latest version of its application delivery system, Citrix Presentation Server 4.5. The software now supports more applications; has virtualization and streaming technologies; and includes features from some other Citrix technologies, including EdgeSight (application performance monitoring) and Access Gateway (secure application access). Presentation Server also delivers Windows desktop applications on-demand

with Citrix Application Streaming technology. The programs run in protected environments on clients and can be accessed even when the client is disconnected from the network. Other new features let administrators see application performance from the perspective of an end user. The software also includes SpeedScreen progressive display technology, which boosts graphics performance over networks, and a Health Assistant, which monitors server health, and it supports up to 500 users per server and has several new security features. Presentation Server will be available next month in Advanced, Enterprise, and Platinum editions and starts at \$350 per concurrent user.

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■ **Ecora Software** announced Ecora Auditor Professional 4.1 to provide centralized management, auditing, reporting, and change identification for configurations in operating systems, database management systems, applications, and network devices. Auditor Professional 4.1 collects asset, security, and configuration settings and then enters the data into a configuration database. Version 4.1 includes a Web-based Enterprise Reporting Center to view and generate reports on the Web. Ecora Auditor Professional 4.1 also includes a "Who Made The Change" capability that adds configuration visibility to see what authorized change could have created unintended consequences.

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■ **EMC** announced its GDDR (Geographically Dispersed Disaster Restart) software, designed to automatically restart host mainframe systems, critical applica-

tions, and Symmetrix DMX storage systems in the event of an outage, both at local and offsite branches. GDDR can also be used to shorten downtime during upgrades and other planned outages. EMC's offering will be available for purchase by the end of Q1.

.....

■ **Planet Associates** introduced the latest version of Planet IRM, a visualized CMDB (Configuration Management Database) designed for data centers and company networks. It can streamline IT functions through a single visual data repository. Among Planet IRM 7.5's new features are navigation tools, reworked equipment replacement procedures, and improvements in the display of data.

Security

■ **Altiris** released Altiris Security Expressions 4.0, software to integrate enforceable security with IT service management. Security Expressions helps enforce compliance through audits, remediation, and reporting. Version 4.0 also features audit support for Solaris 10, AIX 5.3, and SuSE, as well as Web service auditing. The Security Expressions software will be integrated with Altiris Helpdesk Solution, Altiris Task Server, and other CRM products to help customers integrate security into day-to-day workflow and process operations. Security Expressions 4.0 can help secure Linux, Unix, and 64-bit Windows Vista platforms.

.....

■ **Cloudmark** has released an end-to-end messaging security platform. Cloudmark Authority For Mobile Operators guards against viruses, phishing attacks, and spam; protects users from attacks by other mobile

devices; and can be implemented at the SMSC (Short Message Service Center) or MMSC (Multimedia Messaging Service Center). Cloudmark uses message fingerprinting and a global threat detection network to improve security.

.....

■ **Lockdown Networks** released an enhanced version of its Lockdown Enforcer Network Access Control software. Version 4.2.4 now supports Microsoft Network Access Protection to let network administrators enforce policies and manage resources more efficiently. The offering also lets users test and authenticate any network device in a secure quarantine environment before allowing it access to the rest of the system. The Lockdown Enforcer appliance is currently available in a 1U form factor for \$24,995.

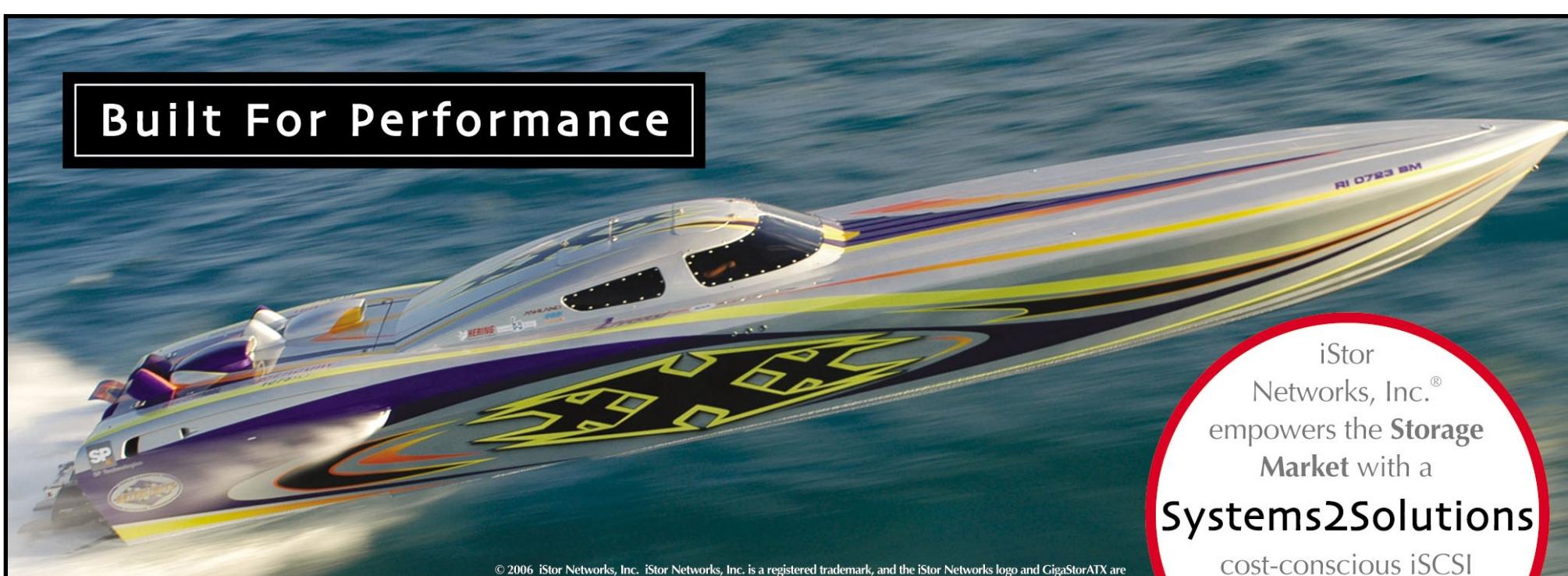
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■ The new **Voltage** Security Network is software-as-a-service aimed at encrypting email. Voltage tries to make email encryption easy to use for average customers. One example is the fact that recipients don't need to install special software to decrypt messages.

Storage

■ **DataCore Software** released SANsymphony Enterprise Edition 6.0, a storage virtualization package that features enhanced automation and auto-recovery services that speed up applications by prioritizing data volume. SANsymphony also offers end-to-end, multipath SAN failover across FC and iSCSI and supports N+1 GRID scalability. The package starts at \$25,000 and can be fully configured for \$50,000 to \$80,000.

Built For Performance



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For VAR's and System Integrators that require a vendor-provided enclosure, iStor offers the iS326 Solution. The iS326 includes the GigaStorATX System supporting eight ports of GbE or a single 10GbE for iSCSI connection, with capacity for up to 15 customer-supplied high-capacity SATA drives.



iS326

When it comes to high-performance, feature-rich, and cost-effective iSCSI RAID storage, iStor Networks solutions should be on your evaluation short list. iStor offers you the balance of price and performance that makes iSCSI IP Storage an obvious "YES" decision for organizations of all sizes or sophistication.

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The iStor Networks web seminar "IP SAN's in the SMB" featuring Brian Garrett of ESG can be viewed at www.infostor.com/webcast.

Make The Connection

Convert IDE Interfaces To The SATA II Standard

by David Gilbert

INCOMPATIBILITY AMONG I/O interfaces is a challenge that IT personnel face while planning for computer hardware upgrades. For years, the typical desktop PC has been standardized on the IDE interface for disk drives, but the new generation of I/O devices features SATA and SATA II connectivity. Not only is the data format dissimilar

between these topologies, but the physical interface is also incompatible.

These hurdles can be overcome with a single product from ACARD Technology: its AEC-7923 IDE to SATA II converter. This little piece of hardware handles the conversion of data flow from parallel to serial transmission and serves as an adapter to connect the different cable connectors for each interface inside the computer.

The AEC-7923 is an attractive product for a variety of reasons, not the least of which are its low cost and ease of use. The converter is also feature-rich, supporting both SATA and SATA II interfaces on the host side and all versions of parallel IDE and ATA on the device side. The functionality of the device is achieved completely in hardware, and therefore does not require any software or drivers in order to work. The converter supports hard drives of up to 750GB or more in size, as well as optical drives such as CD and DVD.

The "secret" to the AEC-7923 is its integrated circuitry designed by ACARD Technology. ACARD has been in the business of

storage ICs for several years and is now leveraging its expertise and resources with yet another product based on its own integrated circuit designs. Because it requires no settings or configurations in order to work, this product can be useful to a wide range of

88SA8040 Serial ATA bridge controller chip (www.marvell.com), but these devices typically only support SATA I and not SATA II data transfer rates and cost more than the ACARD product.

Jason Shek, a marketing specialist with ACARD Technology, tells what sets the AEC-7923 apart from the competition: "... our onboard SOC (system on chip) technology utilized hardware translation of signals to ensure the highest signal quality and

Because it requires no settings or configurations in order to work, this product can be useful to a wide range of applications and market segments, from corporate PC upgrades to more specialized industrial computers.

SNAPSHOT

ACARD Technology AEC-7923 IDE to SATA II converter

\$22

A low-cost, easy-to-use device for connecting IDE disk drives to SATA controllers

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applications and market segments, from corporate PC upgrades to more specialized industrial computers.

There are competing products on the market, such as IC INTRACOM's IDE to SATA converter (www.icintracom.com), and other products based on Marvell's

speed." Commenting on the experience that ACARD Technology brings to the storage market, he says, "Since our clients use our products on mission-critical systems, AEC-7923 is tested by our engineer to meet the toughest standard of data transfer rate [and] stability, as well as compatibility." □

Higher-Capacity Removable Disk Technology

RDX Cartridges Promise Continuing Growth Into The Future

by Tony Bradley

IN THE EARLY DAYS of home computers, we used plain old audio tapes as our version of "mass" storage. That was when hard drives were virtually unheard of, and floppy disks were for the elite. Of course, we have come a long way since then. Hard drive manufacturers now offer hundreds of gigabytes of disk space for a relatively low cost, so the idea of using magnetic tape as a storage medium must be dead by now, right?

Not quite. Tape storage systems established themselves as the default media for backing up and archiving computer data. As hard drives have become cheaper and

network technology has improved, more and more companies are moving away from the slower, less efficient tape backup systems and moving to disk-based backup solutions. ProStor, with its RDX drives and disk cartridge system, is one vendor helping companies make that transition.

The ProStor RDX drive system is the only removable disk cartridge technology designed to be used in an enterprise environment. Competing products are consumer grade and do not offer the same performance or reliability found with RDX. The ProStor RDX system has established itself in the industry and is available from a variety of manufacturers, including Dell (www.dell.com), Imation (www.Processor.com/Imation.com), Tandberg Data (www.Processor.com/TandbergData), and ProStor itself.

ProStor Systems CEO and President Steve Georgis explains: "RDX technology is a high-capacity removable disk cartridge backup solution for servers and workstations that combines the best features of a traditional tape cartridge, such as removability, portability, rugged durability, and long archive life, with the benefits of hard disk, like speed, reliability, and capacity growth."

SMEs can benefit from an RDX solution because it costs less than half of a standard tape backup solution and delivers up to 10 times the performance, with faster access times and superior reliability.

With hard drives becoming cheaper and faster all at the same time, it only makes sense that more companies are looking to migrate from tape backup solutions to disk-based backup. ProStor has increased the capacity of the RDX system by introducing a new 160GB cartridge.

According to Georgis, "Cartridges come in multiple capacities today, ranging from 40GB to 160GB. New cartridge capacities will be introduced about every nine to 12

months with increases of about 50% per year. All RDX cartridges are fully forward- and backward-compatible with all RDX drives (present and future), so there is no technology obsolescence—as the applica-

SNAPSHOT

ProStor RDX 160GB Disk Cartridge

Drive and cartridge bundles starting at \$300

New, larger-capacity cartridge for affordable, high-speed disk-based backup system

www.Processor.com/ProStor

cation requires more capacity, just buy a higher-capacity cartridge."

There are a number of competing products in the growing disk-based backup market. ProStor has to face products such as the SpectraLogic D500 (www.Processor.com/Spectra) and the FalconStor VTL Virtual-Tape Library (www.Processor.com/FalconS). However, with products starting at \$300, the ProStor line may seem more appealing to SMEs that might balk at the sticker price of competing solutions. □

ProStor, with its RDX drives and disk cartridge system, is one vendor helping companies make the transition from tape to disk-based backup.

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OPINIONS

INFO-TECH • INSIGHT

Cell Phone Makers Don't Seem To Get It

It never ceases to amaze me that product vendors get it so wrong when the writing is on the wall right in front of their faces. Such is the case with the big cell phone manufacturers these days. They are selling a Swiss Army knife to a vast market of buyers that only want a butter knife and then wonder why average selling prices, or ASPs, are dropping like stones.

What's their answer? Offer even more features and hike the price in an effort to shore up flagging selling prices and profits. Is it just me, or does it seem as though Motorola, Nokia, Samsung, LG, and the rest of the gang are being sadistic?

**Unit Sales Up,
Prices Down**

Motorola and Nokia recently issued financial results for the last quarter, and the results are telling. While Motorola saw the ASP of its phones drop by about 9% in a single quarter, Nokia's eroded by 4%. Nokia was in a better position to cushion the blow and as a result had a very positive quarter despite sagging selling prices. On the other hand, Motorola—despite selling a record 66 million handsets in the quarter—saw margins cut in half and profits down by 24% over the previous quarter.

Let Them Eat Cake!

I issue a challenge to everyone reading this column today: Try to find a current-generation cell phone from a Big Four

manufacturer that only offers voice and simple text messaging. No camera/video, no MP3 player, no high-speed data capabilities, no storage, no other bells and whistles that the vendors can think of. I'll save you some time—you'll be lucky if your wireless carrier sells one phone that meets the bare-bones specification.

But how can this be if a simple phone is exactly what a majority of the market wants? Since the peasants don't have any bread, the vendors are saying: "Let them eat cake."

But They Don't Want Cake

In a recent Info-Tech Research Group survey of more than 1,000 corporate IT managers, 62% stated they were looking for, and would be buying, simple phones with voice-only capabilities for end users. It seems enterprise users don't want all the bells and whistles on their phones that the cell phone makers want them to have. But it's not just enterprises turning their noses up at the vendors' cake—it's consumers too, particularly in emerging markets.

Take China, for example. According to the CIA World Fact book, the country has a population of more than 1.3 billion people, with an estimated 2006 per capita income of \$7,600 with purchasing power parity factored in. The ASP of a Motorola phone is about \$120 and \$117.50 for

Nokia. That means a Chinese buyer has to work almost a full week to pay for a cell phone.

Now consider that the largest wireless carrier in China (China Mobile) has more mobile subscribers than the entire population of the United States. Add to that the

MARK TAUSCHEK

AUTHOR *Mark Tauschek is a senior research analyst at the Info-Tech Research Group and has more than 10 years experience in the networking and telecommunications field. Mark co-founded a wireless network professional services firm, WFI/Vokal Wireless, and has also held senior management positions for Azonic Networks, AT&T Canada (MTS-Allstream), and Maxlink Communications.*



nearly 150 million mobile subscribers in India and the growing Middle East, and it becomes easy to see why the ASP of cell phones is dropping.

**It Seems
Simple Enough**

So why don't cell phone makers just manufacture basic voice-only phones that are cheap to make? It seems like a no-brainer to the average layperson, but in reality it is more complicated than that. It means that the vendors would have to shift gears from their current engineering and manufacturing models, and that's not easy to do in one or two quarters.

To add to their woes, the wireless carriers that sell the vast majority of mobile phones want to sell data plans, on-demand music and TV, polyphonic ringtones, and all of the other value-added services on which they make huge margins.

Between A Rock & A Hard Place

Cell phone manufacturers are being pulled in different directions by stakeholders and markets that want very different things. On one hand, the North American and European markets are buying fancy, expensive phones—whether they want them or not is another question. On the other hand, there are the emerging markets that don't want—and won't pay for—all the bells and whistles. To add to the complexity, there are the wireless carriers that want to sell data plans and value-added features that they can't

sell to the people who own the simple phones. It puts the vendors in a tricky position, but one they had better adjust to quickly if they have any hope of securing and growing market share while maintaining respectable margins.

In the end, the solution is simple: Make a cell phone that is simple but stylish and can sell for \$60 to \$70 but maintain margins in the 15 to 20% range. The cell phone manufacturers that can pull this off will be successful, while those who can't will continue to struggle. □

*Send your comments to
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WIRELESS

FEBRUARY 2, 2007

Better Wireless Networks

**BumbleBee-TABLET Provides Clear Installation,
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BERKELEY VARITRONICS SYSTEMS' BumbleBee-TABLET takes the power of sophisticated laboratory spectrum analyzers and delivers it to installers in the field and network engineers in the lab. With the BumbleBee-TABLET, enterprises can capture, display, and record wireless spectrum data for better installation, coverage, and interference analysis.



BumbleBee-TABLET includes a 7-inch WVGA LCD touchscreen and an Intel

processor. A 40GB hard drive lets you store and play back captured radio frequency spectral network installation, coverage, and interference data in the field. Advanced spectrum analysis features include user-selectable power triggers, three pairs of markers, spectrogram, histogram, video smoothing, waveform averaging, and one live trace and up to four peak hold waveform traces with peak hold and peak search.

Optional Honeycomb Interference Mapping Windows XP software can be run right on BumbleBee-TABLET hardware while still in the field or later as a desktop application. The Honeycomb software consists of three parts: Projector, Collector, and Analyzer. Sources of interference can be separated from 802.11 WLAN signals, allowing the user to graph severity of interference, percentage of channel capacity

remaining, and other significant interference related quantities. Floor plans or site maps can be used as a reference to collect data; the resulting interference maps can be overlaid onto floor plans for easy identification of interference-prone areas.

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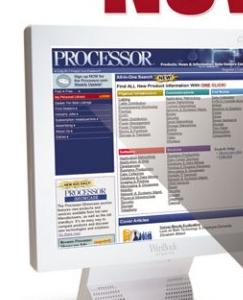
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The Benefits Of Implementing Group Chat

Gain Maximum Security & User Productivity In The SME

by Will Kelly

• • •

ENTERPRISE IM and especially group chat are rapidly gaining user acceptance as business-class, real-time communications and collaboration tools. Introducing enterprise IM and group chat rooms can be a boon to productivity for both office and remote workers alike.

However, implementing IM and group chat on your SME's network requires some preparation to secure your corporate communications and computing network.

According to Jason Fried, founder of 37signals, "The sooner, the better. Start using it, and you won't believe how you

worked without it. And it's not just for remote teams—having a persistent open chat room is a huge benefit for people in the same office, too. It's a centralized place to ask questions, share files, review images, etc. I believe group chat to be the secret weapon of businesses that want to improve internal communication."

Instant messaging can take many forms, including one-to-one communications and one-to-many communications, and the next step is persistent group chat rooms. Persistent chat rooms offer a persistent online environment, much like a virtual meeting room, where participants can enter and exit without the room ceasing to exist. You can

"Persistent chat rooms can also become a real-time knowledge store and an aggregation point for content."

-Jabber's David Uhlir

create persistent chat rooms to support ongoing projects and special events. Other benefits of these chat rooms include centralized policies, logging, and filtering.

According to David Uhlir, Jabber's vice president of marketing, "Persistent chat rooms can also become a real-time knowledge store and an aggregation point for content." He also points to the value of persistent chat rooms as source material for project documentation, meeting minutes, and status reports.

Prepare Your SME For Group Chat

Implementing a group chat application, whether a server solution you host in-house or outsource to a third-party provider, requires planning and analysis.

Paul Duffy, product manager for Microsoft's Unified Communications group that encompasses Exchange Server, Microsoft Office Live Communications Server 2005, and Microsoft Office Communicator 2007, advises that core IM functions, such as chat, group chat, and presence, don't adversely tax network bandwidth. However, if your plans include implementing higher-end voice and video features, Duffy recommends that you do an assessment of your network bandwidth needs.

Group Chat Applications

37signals' Campfire

A hosted persistent chat room that includes file sharing, image previews, and chat transcripts. It is available on a subscription basis. www.37signals.com

Jabber's JabberNow

An appliance-based group chat/IM solution that includes presence with personalized status, one-to-one instant messaging, persistent multiuser group chat, and message archiving. www.jabber.com

Microsoft Office Live Communications Server 2005

An IM/group chat server that includes secure instant messaging, connectivity with major consumer IM clients, presence, Microsoft Office integration, and support for audio and video. www.microsoft.com

JiveSoftware's WildFire

An open-source XMPP (Extensible Messaging and Presence Protocol)-based unified communication RTC (real-time communication) server that includes telephony, file transfer support, and a gateway to public IM clients. www.jivesoftware.com

Joe Hildebrand, CTO of Jabber, also recommends that after fine-tuning your user directory structure, you may need one or more servers for running your IM database, server application, and presence server (depending on the hardware requirements of your chosen IM solution and the size of your organization).

Go to Page 26

DATA CENTER SERVICES

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Don't Trash Your Tapes

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WHAT DO YOU DO with backup tape media you no longer want? Unfortunately, most media and hardware ends up in a landfill, which puts your company's security—not to mention the environment—at risk.

Most companies are focused on having the most advanced storage solutions, which means they often replace their storage media before the end of its useful life.

But even when your enterprise has no use for the tape media, other corporations, governments, and data centers can use these products.

That's where RecycleYourMedia comes in: Sell us your new or used data tape media. We'll secure and destroy your sensitive data with manufacturer-approved processes and equipment. Data cartridges



RecycleYourMedia.com purchases a range of tape media, including these popular brands.

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Consolidating The IT Department

Steps To Take To Make Sure You Get It Right

by Robyn Weisman

AT FIRST GLANCE, consolidating IT departments from multiple locations into a single, cohesive unit seems like a great idea. "Enterprises are constantly looking at where they can 'commoditize' to achieve some economy of scale and cut costs, and the first place many turn to is IT, where a central data center can power much if not all of an organization's locations [and lead to] lower management, vendor, and labor costs and more control over issues such as security, data integrity, and authentication credentials," says Blane Warrene, director of investment technology at ValMark Securities (www.valmarksecurities.com).

Unfortunately, too many enterprises jump into such a project without visualizing beyond that initial glance. "An organization typically calls me up and says, 'Oops, we're in a situation. We're halfway through doing a consolidation, and we haven't thought this through,'" says Alex Cullen, research director of IT leadership at Forrester Research.

IT department consolidation has the potential to improve an enterprise's efficiency, lower TCO, unify business practices and regulatory obligations, and

provide an organization with a single budget for IT, among other things. But there are so many different ways in which to reorganize a given IT department that executives need to make sure that they align the consolidation around a business' overall objectives and needs and not perform IT for IT's sake, says Rod Masney,

president of Americas' SAP Users Group (www.asug.com) and global director of IT infrastructure at O-I (formerly Owens-Illinois; www.o-i.com).

Is Consolidation The Right Move?

According to Cullen, IT executives should keep some fundamental principles

in mind when deciding whether consolidation is the right move for their enterprises. First of all, they need to develop a decision framework around whether to consolidate. While consolidation may make sense for a lot of businesses, a financial services company may operate such diverse businesses within its vertical—for example, currency markets and branch banks—that a decentralized setup may ultimately be a more responsive solution.

Next, IT executives need to consider how this decision to consolidate will impact the different parts of the current IT organization, Cullen says. For example, a medium-sized enterprise might have three offices, each of which has a three-person

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Tips For Rebuilding IT Organizational Culture After A Consolidation

Forrester Research analyst Alex Cullen says that IT executives must recognize the importance of rebuilding an IT department's organizational culture in achieving an effective, successful IT consolidation. Given the disruption caused by such a reconfiguration, the IT executives in charge should have clear goals that they properly communicate to the remaining staff.

Cullen offers these recommendations to keep in mind when making such a transition:

- Senior IT executives must demonstrate commitment to their staffers. "A reorganization is not complete after the staff meeting and email announcement—follow-through to ensure that the expected changes are occurring is essential to showing commitment," Cullen notes.

- Senior IT executives must communicate a consistent message to their staffers about the rationale for consolidating, the benefits of doing so, and their expectations of employees throughout the process. "You need to describe the reasons behind the change and show why the old way would not have worked," says Cullen.
- Senior IT executives must make clear to middle management that the latter is responsible for ensuring the change happens in a steady, straightforward manner. "Nothing makes this clearer than [middle management] knowing that they are being evaluated on how smoothly this happens," Cullen notes.
- Senior IT executives must take the lead in instituting change within an organizational culture. "[They] must demonstrate any desired new behaviors like open communication and

information sharing, collaborative teamwork, and giving credit for successes to those who did the work," Cullen says.

- Senior IT executives must engage their employees in re-creating this new organization rather than having the new organization imposed on them. "Make it as though they are putting it together themselves," Cullen says.
- Senior IT executives should consider rebranding the new IT organization, even providing it with a new name, new business cards, and even a personal gift, such as a fleece pullover with the new department's logo, to acknowledge that the change wasn't easy and that they appreciate all the work their staffers have invested in the change, Cullen says.

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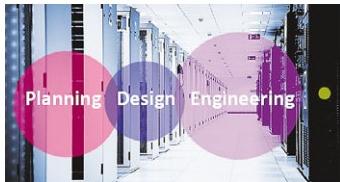
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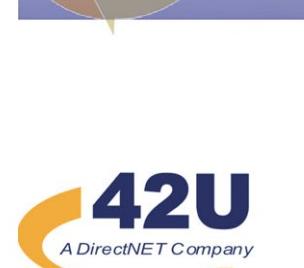
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The Benefits Of Implementing Group Chat

Continued from Page 24

All of the experts we interviewed for this article spoke to the benefits of managing your own IM solution. For SMEs, this means a server-based solution, such as JabberNow, JiveSoftware's Wildfire, or Microsoft's Office Live Communications Server 2005. Dave Hersh, CTO of JiveSoftware, cites the archiving requirements of compliance programs such as Sarbanes-Oxley as a reason to own and manage your own IM server. Using consumer-grade IM clients means you aren't logging your IM traffic, much less owning the content of your messages.

Allowing consumer IM applications, such as AOL Instant Messenger (www.aim.com), Windows Live Messenger, and Yahoo! Messenger (messenger.yahoo.com), can also create another vector for malware attacks, according to Cabri. Additionally, Duffy adds, "Consumer IM clients aren't designed to be manageable." Thus, while the adoption of IM and group chat has been through the consumerization of the technology, you need to balance compliancy and security vs. user

productivity and collaboration. So, if IM and group chat are already firmly entrenched, it could be time to draw up formal requirements for a corporate-grade IM solution.

Frank Cabri, vice president of marketing for IM security vendor FaceTime (www.Processor.com/FaceTimeComm), recommends establishing an acceptable use policy for group chat and instant messaging just like many companies have in place for Web browsing and email usage. Sample topics for an acceptable IM use policy include appropriate usage, setting presence, and organization-specific limitations and policies on file transfers and communicating with IM users outside your SME.

When implementing a server-based group chat application, Hildebrand advises that organizations need to get their Active Directory user directory database situation straightened out. Jabber's Uhli adds, "All your users should be in it with subcategorizations, enabling you to permit and not permit the usage of IM and its features by users and departments."

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Much of the work setting up an IM server is like setting up an email server, according to Hildebrand. He says you can expect to configure the firewall and TCP port and enable access to the directory where your IM application resides.

Delivering the IM clients to your end users can take place through a direct push of the applications to their desktops through an administrative tool such as Microsoft Active Directory. Other delivery options include a download site and even letting your users take advantage of open-source IM clients that support the protocol of the IM solution you are deploying in your SME.

Depending on the group chat room/IM solution you choose to deploy, you must also consider whether to enable access to users outside your corporate network, including partners, vendors, and your employees' friends and family. Server

February 23, 2007

solutions such as JabberNow and Microsoft Office Communications Server 2007 include options where you can secure IM to only within your corporate enterprise.

Group Chat & Your SME

IM and group chat in particular can be both cultural and generational in the eyes of end users, meaning that user education about the benefits of group chat rooms, IM, presence, and the other productivity features is in order. While user education can only go so far, Cabri recommends reinforcing user education with network tools that enable you to coach users in real time to prompt and remind them about corporate IM policies.

Implementing group chat through an open-source, commercial, or a hosted solution if done securely can offer your end users a new level of collaboration and productivity internally, as well as with external vendors and partners. □

Consolidating The IT Department

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database group. Under the existing setup, staffers at each of the three locations are jacks-of-all-trades, and in addition, because each of the three groups must handle such broad duties, the departments as a whole have a hard time keeping skilled

employees because there is so little opportunity for advancement.

In contrast, a reconfigured nine- to 10-person IT organization (Cullen makes clear that consolidation should not be seen as a prologue to layoffs) would enable an enterprise to hire staffers at the junior and senior

levels and hire specialists, perhaps one who is an Oracle expert and another who is a Microsoft Certified Database Administrator.

Warrene believes that this sort of consolidation will drive firms to pursue highly skilled individuals who can manage these more specialized scenarios. "While consolidating may be cutting costs and perhaps labor in a volume sense, it opens up the door for some discretionary funds for specialists," he says.

Finally, Cullen says that IT executives need to keep their employees foremost in

their minds when making the decision whether to consolidate. "Their staffers are used to working with a group of people they liked, and you're now putting them with different people, and so you have to keep the cultural aspect in mind," he says. "During and after the consolidation, they may be more likely to go by the book or do their jobs and not take responsibility for the [new group]—whereas before they worked in a cohesive unit that dealt well with pressure—if this cultural aspect is overlooked." □

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Is Vulnerability Assessment Dead?

A Look At VA Today & Into The Future

by Curt Harler

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SOME SAY VULNERABILITY assessment tools are dead. Others see VA tools morphing into security configuration management tools. Some vendors are repositioning themselves as such. However, the challenge with security configuration management is that it doesn't provide actionable intelligence.

Because the typical SME cannot afford the mega-tools used by Fortune 500 companies, most want a simple, effective solution. Balance the need for security with available funds, and SMEs are ripe for new ideas.

What Is An SME To Do?

"Dead? I don't think so," says Jason Young, senior product marketing manager at Blue Lane Technologies. "There's a place for these solutions because they do add value. If you have a large network, the endpoints are constantly changing, and as a security administrator, you want to be aware of the changes. You want to know if someone brought an unauthorized comput-

er from home and plugged it into the network. VA tools can help here."

Young says he thinks VA tools will continue to work in conjunction with the standard toolset of security teams. "VA is for assessment. Other tools are for detection and prevention. Operational tools are for fixing and maintaining. VA will remain part of the life cycle," he says.

"Dead? My experience is that security technology never dies. It just evolves into something new," says Alan Shimel, chief strategy officer and co-founder of StillSecure.

However, he adds, "VA as it has been used over the past years is dead. History. Toast."

"It is not dead," says Ross Brown, CEO at eEye Digital Security, "but there are some interesting changes happening."

That opens the debate over what shape VA tools will take as they morph into security configuration management tools. Young says he believes that in order to really add value, VA tools need to bridge the gap and provide some method of remediation (for example, patch management capabilities) or prevention (for example, network access control).

Brown predicts VA will move from an auditing function to becoming more integrated with other functions. "On the customer side, security will have a seat at the IT table," he says. He sees the health care and financial services markets driving the change.

"Before 2001, VA products were used by security auditors or consultants who did VA once a year and delivered a report," Shimel says. The customer worked for a year to correct vulnerabilities and repeated the cycle the next year. "For the past three or four years, that has been the state of many companies, whether large or small. It's a no-win game," he adds.

The downside of that game is that no matter how many scan-fix cycles a company goes through, security is not appreciably better.

"I'm not advocating not scanning for vulnerabilities," Shimel says. He notes that StillSecure sells VA products. "But VAs are only one part of a good security plan," he says.

Young says, "The dark, unexplored area that we run into all the time is what our customers affectionately refer to as 'the unpatchable.' It is great to have data on what servers are running in the data center and assume that finding a vulnerability magically leads to a fully patched system. However, what if that system is no longer supported by the vendor? What if it's an embedded system that you

can't get to, like a medical imaging system? What if you install the patch, and it breaks the applications?" Young asks.

Down The Road

XCCDF (Extensible Configuration Checklist Description Format) will be a major factor. A government standard, it will provide a check for VA and security tools in a common language. Where current regulations are for oversight, XCCDF will give a file to check against for a given class of variables. Look for it to be incorporated in everyone's products. eEye will bring it out in a product during the second quarter.

Brown sees two trends with VA. First, he expects the quality of audits to expand through the application layer, network, and device levels. There will be coordination and integration throughout. Second, he sees VA moving from an audit model to coordination of risk throughout the entire application stack.

Brown predicts coordination of VA audits that will make mitigation more intelligent and data more actionable. In addition, he says 99% of VA tools today tell what risks they identified but do not tell what areas they were unable to check. This illusion of security will change.

Shimel sees a world where SMEs regulate and control access to their networks based on VA and profiles. "We call this policy-driven networking," he says. "We will test, scan devices, know a network's vulnerabilities. The idea is to try to break the scan-fix cycle."

Young predicts a big wave is coming in virtualization. "Virtualization is a godsend to data center managers because they can leverage their investment in hardware better, and they have tons of flexibility," he

says, but warns that such flexibility, unfortunately, can lead to process lapse.

"If you store a virtual machine as a file on a SAN, over time that machine becomes riddled with new vulnerabilities that will only surface once it is put back into production. To date, no VA tools that I'm aware can scan an offline virtual machine. SMEs are going to have to consider shielding strategies that can protect these machines the instant they are put into production, regardless of their vulnerabilities," Young says.

He says SMEs need to focus on leverage: "Ask, where can I put the least amount of effort that gives the greatest benefit?"

Unlike large organizations with huge resources to throw at a problem, SMEs typically have to do more with less. "I've seen security tools that essentially require a dedicated person to sit and stare at a monitor. That won't work for an SME where it's probably someone's part-time job to manage that product. The same concept applies to complex products," Young says. "Security is technically very complex, but the products don't have to be. A lot of vendors haven't caught on to this yet. Any security tool that must be tweaked and tuned by someone with a Ph.D. in network security is typically not a good fit for an SME." Blue Lane's server vulnerability shield is an appliance-based solution that offers inline vulnerability remediation for server OSes, databases, or applications.

Some vendors are looking at configuration management, which looks at traffic and the applications running.

"Information is good, but you have to be able to act on it," Shimel says. He sees SMEs taking actionable intelligence from VA and marrying it to location-specific data and building policies based on that information without constantly patching. StillSecure's three-part StillSecure Suite aims to do that. The most important component is the Safe Access sector, which allows an SME to vet a user when she comes onto the network and continue to monitor the user's activity after she is admitted. Levels can be set for employees, outside contractors, and guests. A user's activity is scanned the whole time, and the user can be quarantined at any time. □

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WHAT'S HAPPENING

Pulizzi Powers Up

Integrate Power Control, Power Monitoring & Environmental Monitoring

by Julie Sartain

• • •

THREE MAJOR ISSUES facing data centers today are power, cooling, and staffing remote sites. Pulizzi Engineering (www.Processor.com/PulizziEngineering), located in Santa Ana, Calif., has a solution for all three problems: a new product series called the IPV42 and IPV70 series, the next generation in Pulizzi's line of Intelligent Power products.

About The Company

Pulizzi provides power distribution and remote management solutions for rackmount and electronic enclosure applications. The company started in southern California more than 30 years ago as a contract assembly supplier to the aerospace industry. It made its reputation on being the highest-quality supplier for those critical applications. "As the computer industry began to rapidly grow, we became a supplier to rackmount computer vendors," says Joe Skorjanec, sales manager and product developer at Pulizzi Engineering. "Our early products were both power distribution and power control."

The majority of Pulizzi's clients are either government/military or Fortune 500 companies, and its products are used in very critical applications. "Our clients power computer, telecommunication, and test systems that need to be online 24 hours a day, 365 days a year," notes Skorjanec. "We follow a product development process that is very closely linked to our clients, and most of our product designs are the result of direct customer feedback."

According to Skorjanec, half of the company's business is built to order where

clients either select the configuration options, or Pulizzi designs from scratch to meet the customer's needs. This allows the company to quickly get new designs to market. All of the products that Pulizzi Engineering produces are related to power distribution and remote management. It has a single company focus in this area.

For example, it provides basic power distribution, which includes circuit breakers, EMI/RFI filtering, surge suppression, and multiple outlets; metered products that provide a local current meter to measure power draw; remote EPO products for customers that work in the test and measurement industry; and the switched power distribution units, which are part of its intelligent power controller series. These products allow outlets to be remotely switched on or off and allow for remote monitoring of power or environmental sensors, explains Skorjanec.

"We first designed microprocessor-controlled power controllers in the 1980s, which used a serial computer interface to turn outlets on and off. Today, our products allow power to be controlled over a computer network, and in addition to on/off control, we now have power/environmental monitoring," says Skorjanec.

Pulizzi's transfer switch products provide dual power inputs. In the event of a power failure, they switch between sources, so the equipment stays powered. The company also offers voltage transformers that step voltages up and down—this prevents damage to equipment by providing the correct operating voltage. Plus, it offers a variety

of cables and accessories to interface between power distribution units and the equipment or enclosure, notes Skorjanec.

What's New At Pulizzi

Pulizzi's newest series, the IPV42 and IPV70 vertical power strips presented the company with new challenges. "The main challenge was fitting all the necessary circuit boards and electronics into a 38- x 2- x 1.89-inch strip," says Skorjanec. When dealing with AC power, there are some physical limitations, he adds. Everything must be sized appropriately for the amount



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of current the components carry, or the result is excess heating. In addition, the processor and memory power had to be increased—basically, there's a small computer "inside" the power strip that's continually monitoring sensors and communicating with the network.

"This new series is a vertical mount power distribution unit that integrates power control, power monitoring, and environmental monitoring all in one device," says Skorjanec. "The 42-inch (IPV42) and 70-inch (IPV70) tall vertical strips conveniently mount inside a standard 19-inch computer enclosure or rack. The compact design mounts with a standard mounting flange or optional tool-less mounting. One main power input distributes power to eight, 16, or 24 outlets."

These products also come with an option for standard three-prong 120V outlets or

computer-style 208V outlets, continues Skorjanec. This series features a full-range power supply for operation from 100 to 240V, which matches the ratings of most servers and switches. Critical equipment can be connected to any of the outlets and then controlled on or off with a network connection.

In addition, adds Skorjanec, the unit accepts optional environmental probes that measure temperature at two locations and humidity at one location. The intelligent vertical strip monitors power and environmental levels and can either send alerts or control outlets when preset thresholds are met. The unit ships with all the necessary communication cables and mounting hardware for plug-and-play operation.

"We saw a need for a product that combines power distribution, power control/monitoring, and environmental monitoring capability in one box," says Skorjanec. "This design provides individual outlet control, remote and local current meter, voltage and power monitor, two temperature locations, humidity, and contact closure for door or water sensors."

According to Skorjanec, customers are currently purchasing two or more devices to accomplish this same thing. "Our approach was to combine features as a way to save rack space and to reduce cost. Recent data center surveys indicate that power and cooling are the largest issues facing data center managers," he says.

"We met the need for growing power demands by offering high power input versions on our model, which distributes power at 208 volts, three phase," says Skorjanec. "And we introduced the product in a vertical strip to reduce cable clutter and free up rack space." The extra rack space improves airflow and helps with cooling, he notes. The environmental sensors provide temperature monitoring at two rack locations, and this helps identify hot spots in the data center by directing the cooling to where it is needed most.

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High-Definition Videoconferencing For The Boardroom
New Tandberg Centric 1700 MXP Offers A 20-Inch Monitor With Integrated HD Camera

Managing geographically distributed employees can be a challenge. While email and phone conversations provide a good way to communicate, there's no substitute for face-to-face meetings. Teleconferencing makes it possible to bring multiple groups together without the need to travel to a common location. Tandberg's Centric 1700 MXP takes the concept to a new level—in HD.

The Centric 1700 MXP is a personal HD desktop video-conferencing system designed to integrate easily into any executive's work environment. While many of the older technology systems were typically set up in a conference room, the Centric 1700 MXP is built around a 20-inch monitor and HD camera. With CD-quality audio and HD video, the system switches seamlessly between video mode and video conferencing.

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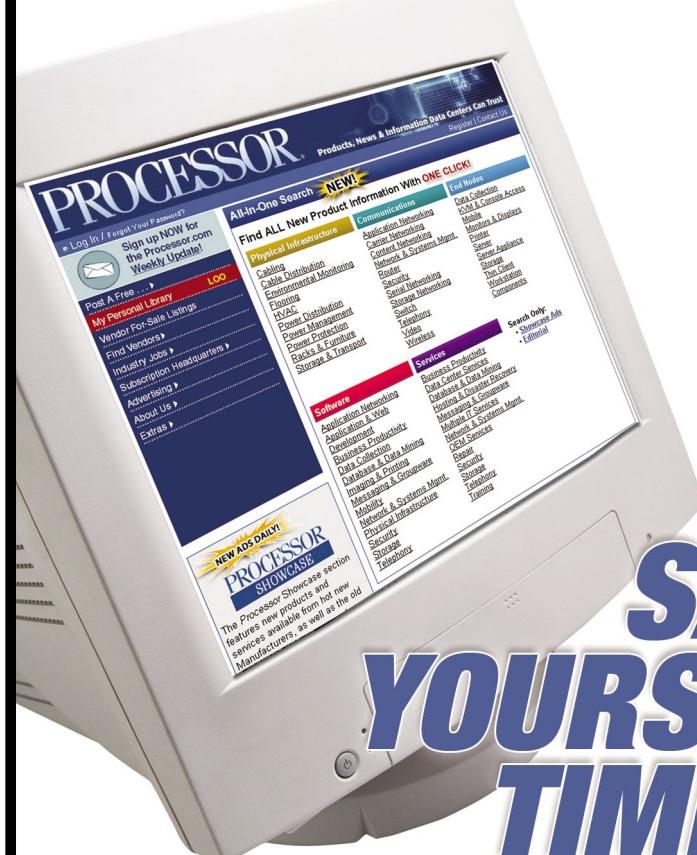
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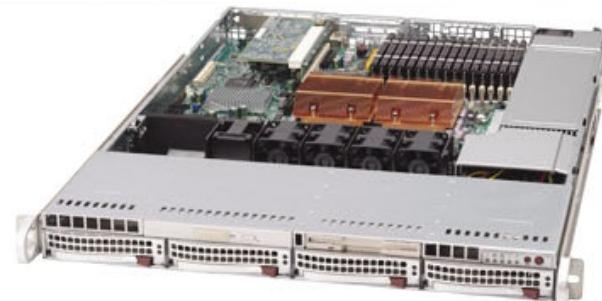
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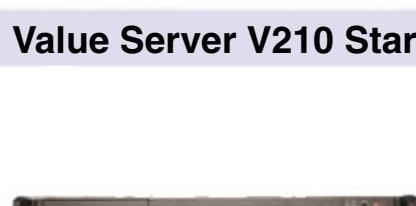


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